

Control of

GROUND SQUIRRELS

PRAIRIE DOGS

AND

FIELD MICE

Prepared by

Mark Worcester
Assistant District Agent
U.S. Fish and Wildlife Service

Wayne J. Colberg
Extension Entomologist

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NORTH DAKOTA AGRICULTURAL COLLEGE

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GROUND SQUIRRELS

Ground squirrels are a rodent pest on farms when favorable weather, cover, food and lack of disease permit them to become abundant. Damage to growing crops is the primary reason for control. Damage done is usually in the spring, caused by digging up newly planted seed and in the summer by cutting off stalks of ripening grain.

Three common species are the "Flickertail" or Richardson ground squirrel, well distributed over the eastern two-thirds of the state; the 13-Lined ground squirrel, often called a "Striped gopher" found over the entire state; and the rather large, gray Franklin ground squirrel found in the eastern quarter of the state.

The adult Flickertail is of a rather uniform yellowish to grayish color, about 12 inches long including a 3-inch tail. The 13-Lined ground squirrel is readily identified by alternating dark brown and whitish stripes the length of the body. The Franklin squirrel is a large gray ground squirrel reaching a length of 14 inches including a moderately bushy tail about 5 inches long.

Ground squirrels, the Flickertail in particular, have a rather long period of hibernation in North Dakota. Control must be begun early in the spring as soon as the squirrels are active and usually cannot be successfully continued after mid-August -- sometimes earlier.

Poisoning is the most efficient method of controlling ground squirrels. It is particularly effective in the spring when the animals first come out of hibernation. At this time ground squirrels take bait readily. Control in early spring kills adult animals before the young are sufficiently developed to take care of themselves. Economical control, though not quite as efficient as that obtained in the spring, can be secured at any time the rodents are out in the open.

Satisfactory control calls for united effort among farm operators in any area where control work is done.

In poisoning ground squirrels, place a teaspoonful of the poison bait just outside the entrance of each burrow. Scatter bait thinly enough so livestock cannot pick it up. Sheep and poultry should be excluded from baited areas. The bait should not be placed inside the entrances of the burrow or on the loose dirt which has been thrown out. A quart of bait should treat about 60 burrows. It will usually be necessary to go over the area a second time.

Directions for preparing poison bait:

Clean, plump oats...14 lbs.	Gloss starch.....3/4 oz.
Strychnine alkaloid....1 oz.	Heavy corn sirup.....1 pint
Baking soda.....1 oz.	Glycerine or
Water.....1 pt.	Mineral oil.....1 tbsp.

1. Dissolve starch in a little cold water.
2. Add boiling water until starch thickens (cooks).
3. Mix sirup with the remainder of the water
4. Add starch mixture to sirup mixture, stir well, heat to near boiling but keep below the boiling point.
5. Add strychnine alkaloid stirring until thoroughly mixed.
6. Add mineral oil and glycerine, stirring constantly.
(Be sure step 6 follows step 5.)
7. Add soda slowly and mix constantly. (Too much at one time will foam over the container).
8. Pour solution over 14 pounds of oats and mix thoroughly. Dry grain for 24 hours.
9. Destroy all residue or spillage by burning or burial. Store bait in safe place. Label it POISON. Keep bait away from poultry, livestock and irresponsible persons.

Ready-mixed ground squirrel bait may be secured from the U.S. Fish and Wildlife Service through your County Extension Agent. This bait is dyed a brilliant yellow to discourage bird feeding. Poison baits are not available.

PRAIRIE DOGS

Prairie dogs are established in western North Dakota. They destroy range and pasture grasses and crops growing near their colonies. They, too, live in burrows.

Prairie dog control is secured with the same bait used in ground squirrel control. Scatter the bait on the clean ground--not on the mound--at the rate of 1 tablespoonful to each burrow treated. One quart of the poison grain will treat about 40 burrows.

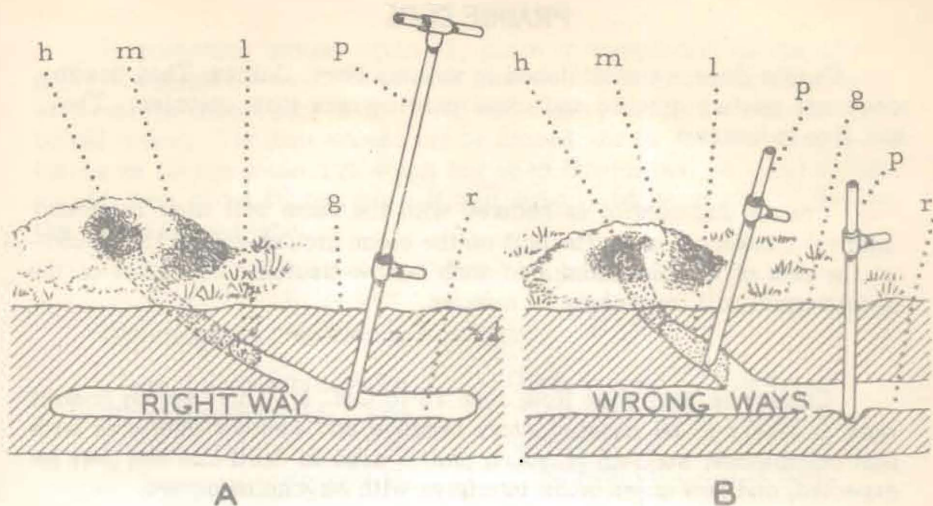
Control is best done from June 15 to Oct. 1. Early spring control work is likely to be unsatisfactory because bad weather interferes with bait acceptance, survival of young prairie dogs in April and May may be expected, and new green grass interferes with strychnine action.

POCKET GOPHERS

Two species of pocket gophers found in the state are the Mississippi Valley species in the Red River Valley area and the Plains' species in the central and northern areas. They feed on roots, which they secure in their digging operations as tunnels are constructed. The extent of the workings of an individual pocket gopher will be indicated by the series of mounds of loose dirt thrown up.

Damage by pocket gophers will depend upon the value of the crops in which they are working. It is not uncommon to find 6 to 10 of the animals per acre in good stands of alfalfa or sweet clover. One pocket gopher in a patch of potatoes or carrots will destroy large amounts of the crop.

Pocket gophers are efficiently controlled with poisoned bait or special pocket gopher traps. Peeled carrots, parsnips and sweet potatoes make good bait. Cut them into pieces 1/2 inch square by 1 inch long. Wash, drain and sprinkle over them 1/8 ounce of powdered strychnine per gallon. Stir to insure even distribution of the poison. Use the baits soon after they are prepared. Keep baits from children, irresponsible persons and domestic animals.



Right and Wrong way of using runway probe.

An equally good bait is prepared in the same manner as ground squirrel bait by substituting 20 pounds of clean wheat for the 14 pounds of oats. This bait is not perishable and is much easier to handle.

Place baits in the main runways of the pocket gophers, near new mounds. A probe, such as an endgate rod or a broom handle, can be used to locate the runway. Then drop baits through the probe holes. Use 1 tablespoon full of wheat bait or 1 square fresh vegetable bait. Close it to prevent entrance of light into the runway.

For more detailed instructions secure Wildlife Leaflet 340 on Pocket Gopher Control from your County Extension Agent or the U.S. Fish and Wildlife Service.

FIELD MICE

Fifteen or more species of field mice are found in the state. Under favorable conditions field mice may occasionally reach plague proportions in local areas. In addition to feeding on planted and growing grains, they feed on stored grain where available. Mouse control is especially import-

ant to the small grain farmer, since mice are a principal offender in contaminating grain with droppings and urine, making food or malting grain subject to seizure and diversion to livestock feed under Federal Pure Food Laws.

Grain storage sites in rural areas should be checked frequently in the fall following harvest as several species have a habit of moving into shelter from the fields. Mice frequently girdle trees at the ground line under snow where damage is not noticed until spring.

Clean cultivation discourages field mice. However, strychnine-oat bait is the most practical means of control. Fence rows, waste land, or grassy areas offer good field shelter for mice. Baiting may be done as a preventive measure in the fall, especially around grain storage bins or tree plantings. Bait is placed by scattering it lightly in mouse trails or "tunnels" through the grass, in artificially made mouse trails or in shallow furrows. When poultry or livestock are present, protected baiting stations can be made from boxes, tin cans, tile or even by covering bait spots with a forkful of hay or straw thrown over a post or small branch laying on the ground.

Strychnine-oat bait may be prepared as for ground squirrels, but must contain a higher strychnine content since mice feed sparingly though frequently. To prepare, use only 10 pounds of clean oats rather than 14 as described in the ground squirrel bait formula. Yellow-dyed, already-mixed bait may be secured through your County Extension Agent.

RATS AND MICE

Control of rats and mice is described in detail in NDAC Extension Service Circular A-31; U.S. Fish and Wildlife Circular No. 13, Conservation Bulletin No. 19, and Wildlife Leaflet No. 349. All of these publications may be secured from your County Extension Agent.

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