RURAL MUNICIPALITY OF
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Rat Identification and Prevention

Rats are the most destructive vertebrate in the world. Globally widespread, rats cause major economic losses to stored and infield crops, destroy property, and transmit diseases. The most common rat in Saskatchewan is the Norway rat. Rats can sometimes be mistaken for other rodents such as muskrats, gophers and ground squirrels. There are three important aspects of prevention of an infestation. Knowledge of identification, signs of presences, and steps of prevention.

The Norway rat (*Rattus norvegicus*) is one of the most destructive creatures known to man, and the most common species of rat in the Canadian Prairies. The Norway rat has a wide range of colours – from reddish to greyish brown or completely black on the back and sides. The underparts are tinged with grey to a buff or yellowish-white. Average body length is 40 cm (15 in). Cylindrical tail, that is ridged and hairless and shorter than body. Norway rats average adult male rat weighs 450 grams (females weigh slightly less)

Identifying the presence of rats on your property is the first step to preventing loss crops, feed, and destruction of property. The cylindrical burrow entrance of a rat in soil or in straw or hay bales measures about 5 to 7.5 cm (2 to 3 in). Unlike native rodents, the burrow entrance of a rat is clean of debris and excavated soil particles. Rats leave well-beaten trails about 5 cm (2 in) wide from their nest areas to food and water sources. Rats often dig lengthy travel runs under objects such as bales, planks, granaries, plyboard and even idle machinery, to move from area to area. Rats will make holes in walls or floors soon after invasion; wall holes are usually just inches above the floor. Holes in floors are generally close to walls or under supporting skids or poles. Rats must chew continuously to wear down incisor teeth (front teeth). Most often, rats will chew materials close by such as plywood, structural woodwork, plastic panelling, frozen ground, and even concrete. Rats are ground dwellers, so their nests are built on or below ground level. The nest of a rat can consist of almost any material – usually, food remains and other available items such as paper, straw, cardboard, rags or shredded plastic bags. Droppings are another clear sign of rat infestation.

See other side

Rat droppings are blunt at both ends and the shape and size of an olive pit, measuring 1.25 to 1.5 cm (0.5 to 0.6 in), and shiny black. Droppings fade in time and soon turn to grey-white.

Steps of prevention are: removal of food and water resources, removal of rat shelters and rat proofing structures, and baiting. **Property owners and tenants can take these basic preventive measures to help stop Norway rats from establishing populations by removing all food items from your property and keeping your property clean and tidy.** Rats can eat almost anything; therefore, it is important to remove all food items such as garbage, empty food containers, and **spilled grain or feed**. Rats will make any object their home as long as they can crawl underneath it. Until a rat can seek out permanent cover, it will use any flat object lying on the ground including tires, planks, bales, etc., therefore it helps to disrupt their shelters by moving bales from one stack to another to prevent a nest from being established, elevating farm outbuildings, protecting doorways and windows, and utility connections, and by protecting other openings to barns, sheds, granaries, warehouses, and industrial structures, rats can be successfully turned away from potential shelter. **Efficient rotation of stored grain or forage bales will also discourage rat activity.**

Baits are available in many formulations. Anticoagulant baits are formulated as loose meal, pellets of all sizes and colours, and paraffinized blocks, which are useful in damp locations. Anticoagulants act by interfering with blood clotting, and death results from internal or sometimes external bleeding. Death, after the rats consume the treated food over a period of three to 10 days, is relatively painless. Warfarin has the longest history of use on the farm. These poisons are relatively safe because they are less potent and take a longer period of time to produce death. In general, anticoagulants are relatively safe for humans and non-target animals. The onset of poisoning is relatively slow, and when accidental ingestion of the anticoagulant poison occurs, there is time for the antidote Vitamin K, or for a blood transfusion, to be administered. A large, single dose of the older-type anticoagulant such as warfarin will usually not kill a healthy animal. Even though house cats and some dogs may kill rats, they do not reduce the numbers for effective control. Under some circumstance's cats may help prevent migrating rats from re-infesting a rat-free property. That's why baiting and trapping remain the best form of population control. Bait stations which are closed and locked give rats the security to feed. The bait inside the station is protected from the elements. Humans, especially children, and non-target animals are protected from accidental poisoning.

Provincial responsibility for the administration of the rat control program lies with Saskatchewan Agriculture. However, *The Pest Control Act* clearly identifies that the responsibility for controlling and destroying pests resides with every person who owns land and buildings, occupies land and buildings, or controls land. Rural municipalities can pass bylaws requiring every resident within the rural municipality to take all appropriate measures to destroy, control and prevent the spread of rats and other pests.