

Composting & Rats

Are concerns about rat activity keeping you from backyard composting?

Read on to learn facts about rat life, and how to successfully compost without attracting rats to your yard. With proper compost pile care, attention to detail, as well as some knowledge about these critters, you can absolutely make that nutrient rich, microbially active soil amendment we call compost, that your garden so craves!

Rat Facts

There are two main introduced species of rats that dominate urban areas in British Columbia. Both species of rats are most active at night and have a nest or den from which they leave to go on nightly foraging expeditions. These rat species are adaptable when it comes to choosing a food supply.

Rats will forage within 100m of their den but can travel longer distances if food is scarce.

Norway rat (*Rattus norvegicus*)

- Stout and greyish-brown
- Can weigh up to 0.5kg.
- Their tail is shorter than the length of their body.
- Typically live close to ground level.



Roof rat (*Rattus rattus*)

- Slim with dark coat.
- Tail is longer than the length of their body.
- Typically seek shelter at higher levels (e.g.) attics.



The Triangle of Life

The rat's "Triangle of Life" is food, shelter, and water. They choose their habitat based on the availability of these three conditions— as well as easy and low-risk travel routes between those conditions.

- **Food:** Rats will eat anything! Food conditions that may attract rats include garbage, litter, dog feces, animal feed, and poorly managed compost. Rats

can not thrive solely on vegetable and food scraps; they produce more babies on a balanced diet that includes protein.

- **Water:** Rats will be attracted to standing water, bird baths, water features, and irrigation.
- **Shelter:** Rats burrow into any available earthen space with proximity to food but prefer fresh and fertile soil to make their nests. They seek out areas where they feel protected from predators. Dense plantings, tall weeds, and piles of lumber, rocks, or other kinds of clutter provide safety to a rat. The burrow is part of a network that has multiple escape holes. Rats use loose material to cover up their escape holes.

The key to keeping rats out is to disrupt this triangle of rat life (food, water, shelter).



Entrance to rat burrow in soil

Design Your Garden and Manage Your Compost to Disrupt the Triangle of Rat Life

Garden

- Build garden beds using untreated and unpainted wood, stone, galvalume metal or concrete
- Keep the fence line and any areas abutting a structure clean, and without debris against it
- Choose plants that don't create cave-like environment. Maintain a clear line of sight under plantings.
- Remove fallen fruit or nuts and compost them.
- Eliminate standing water and improve drainage.

Compost

- Maintain bins with tight closures and baseplates or place bins on hardscaped surfaces
- Preserve at least 1 meter of totally open space around compost bins and place bins at least 30 meters away from garbage bins
- Avoid putting meat, bones, dairy, and cooked foods in your backyard compost bins
- Maintain a compost bin with balanced amount of green and brown materials (see Factsheet #1: Backyard Composting)
- Add food scraps to composting piles and cover with brown or carbon-rich material promptly (i.e. leaves, straw, ripped newsprint or cardboard, chipped woody debris) right away.
- Aerate and rotate piles regularly (a compost aerator is ideal and available for purchase at the CEC).
- Choose a cylindrical compost bin rather than a square compost bin, so rats have less edges to chew on .
- Quarter inch hardware cloth can be helpful to boost the rodent resistance of your compost bin. See Factsheet # 3 for how to wrap your Greencone Food Waste Digester, and below for how to wrap an Earth Machine
- Human traffic, natural light and open space are stressful to rodents – site your compost bin appropriately in a well lit, open space where people move by frequently.



Wrap hardware cloth around bottom of Earth Machine. Bend ends in opposite directions.



Hook ends together.



Make sure all edges are covered.

Rodenticide Poisoning

Second-generation anticoagulant rodenticides (SGARs) are poisonous baits that cause death through internal bleeding. Since 2023, the use of SGARs has been restricted to essential services to prevent direct non-rodent poisoning and secondary

poisoning. Only licensed essential services and pest control companies can purchase and use SGARs in British Columbia. These SGARs are not for home use.



Targeted rat eats rodenticide



Rat becomes lethargic or dies, but poison stays in the body



Predators feed on poisoned rats



Non-targeted animals become sick or die

Oh Rats! They have already moved into my garden and compost pile...

Use this list to determine if you have rats and what follow-up actions to take.

Inspect for Signs of Rats

- ☐ Live or dead rats
- ☐ Gnaw marks
- ☐ Runways (worn-down pathways)
- ☐ Rub marks (sebum trails)
- ☐ Droppings and urine
- ☐ Earthen burrows with round openings about 1-4 inches in size, may be surrounded by loose dirt or "kickback"
- ☐ Two or three exit holes, often covered with detritus like leaves, or soft plastic

Clean up, remove clutter, and remove shelter

- ☐ Clean dropping- and urine-affected areas to sanitize, destroy scent trails, and disrupt communication
- ☐ Clean up fallen fruit, garbage, dog waste, and animal feed
- ☐ Ensure garbage bins are on concrete
- ☐ Clear out clutter to remove shelter and places for rats to hide, sleep, nest, and reproduce
- ☐ Keep all tools, scrap wood, gardening materials, compost feedstock etc. at least 15 inches away from walls and fence lines
- ☐ Avoid dense, low-lying, and cave-like plantings
- ☐ Trim plants away from your compost bin, so there is space all the way around the bin

Ensure you are composting correctly, by taking one of our composting workshops or checking out other factsheets. A well functioning compost pile is much less attractive to rodents.

Repeated Burrow Harassment

- ☐ Break apart earthen burrows using a hand shovel or gardening hoe or by stomping with a heavy boot
- ☐ Discourage burrowing by back-filling landscapes with fine gravel or landscaping pebble
- ☐ Do not place a board, rocks, bricks, or bottles over burrows or pour toxic liquids into a burrow
- ☐ A garden hose can be placed in their burrow hole and used for burrow harassment or to flush them out
- ☐ Try burrow harassment every day to see if you can stress them into relocating. It may take multiple rounds of harassment to see an effect
- ☐ Other treatment options include bait boxes and working with a pest control company



Compost aerator to regularly aerate your compost piles or to disturb rat burrow holes



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