Caring for your worms

Worms are living creatures with their own unique needs and it's important to create and maintain a healthy habitat for them to do their work. By supplying the right ingredients and care, your worms will thrive, reduce waste and make compost for you. Happy and successful composting!

Helpful resources:

RDN Solid Waste Department

- Visit the Solid Waste section at www.rdn.bc.ca for composting information, links or to download brochures on composting and grasscycling.
- Call the department at 250-390-6560 (Nanaimo area) or 250-954-3792 (Parksville-Qualicum area) to obtain RDN brochures on composting and grasscycling or other information.

Nanaimo Recycling Exchange (NRE)

- Call the NRE at 250-758-7777 to purchase redworms and get advice on worm composting.

YouTube

- Visit www.youtube.com to view several fun and informative video clips on worm composting projects.

Worms Eat My Garbage

- "Worms Eat My Garbage" by Mary Applehof provided background for this brochure. Visit www.wormwoman.com for information on worm composting or to order books on the subject.

100%

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BIOGAS ENERGY

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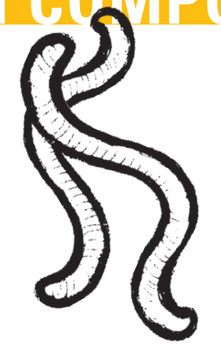
WORM COMPOSTING



What you need
How you do it
What happens...

REGIONAL DISTRICT OF NANAIMO

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Let worms do the work

Want to reduce the garbage you generate but don't have room for a backyard composter? Looking for an environmentally educational and fun project for the kids? Then put worms to work for you.

Worm composting or vermicomposting is a natural method for recycling food waste. It can be done year-round, indoors and outdoors, by apartment dwellers and householders. The compost produced is a good soil conditioner that adds important nutrients for houseplants, gardens and lawns!

How you do it

Fill the container with damp bedding. Add the worms. Pull aside some of the bedding, bury the food waste, and cover it up with the bedding.

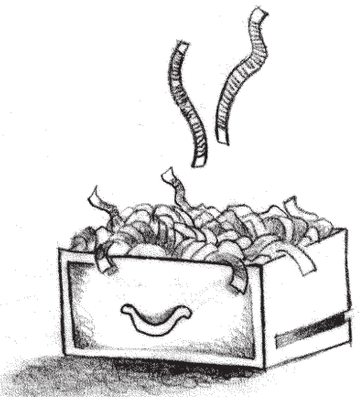
What happens

Over a period of two to three months the worms and microorganisms eat the food waste and bedding material, producing rich compost.

Sustain the land, save the landfill

Food waste and other organics comprise up to 50% of household garbage. Composting programs are key components of the Regional District of Nanaimo's Zero Waste plan to eliminate garbage, reduce greenhouse gases and create a more sustainable region.

About 500 grams (gm) or one pound of redworms converts 3.6 kilograms (kg) of food waste per week into a soil enriching compost. Over the course of a year that means sending 187 kg less waste to the landfill and helping to achieve the region's goal of diverting 75% of its waste by 2010.



It is Simple.

Here's what you need.

1. A fairly shallow and wide container (made of wood or plastic)
2. Bedding (shredded newspaper will do)
3. Worms (750 – 2000 redworms)
4. Food waste (uncooked fruit and vegetable waste)

Worm bins

Four Key Ingredients

1. The Container

Most people buy a specifically-designed worm bin or use a 53-litre plastic storage bin. Other options include old trunks, dresser drawers or barrels.

- Bin should be 20 to 30 centimetres (cm) deep.
- Provide 30 square cm of surface area for each 500 grams of food waste added per week.

Air flow and drainage

Give your worms air to breathe:

- Drill eight to 12 holes about five cm apart in the bottom of the container. If contents get too wet, drill more holes.
- Place a tray under the container to capture excess liquid for use as a plant fertilizer.
- Raise the bin on bricks or wooden blocks.

Covering and locating

Cover the bin to conserve moisture and provide darkness for the worms. Indoors, place a sheet of dark plastic or burlap sacking on top of the bedding, or cover with an aerated lid. Outdoors, use a solid lid to keep out unwanted scavengers and rain.

Worm bins can be kept in the basement, shed, garage, on the balcony or under a kitchen counter. They must be kept out of hot sun, heavy rain and cold. When temperatures drop below 4˚C, bins should be moved indoors or be well-insulated.

2. The Bedding

Suitable bedding materials include shredded newspaper and cardboard, dry leaves, chopped-up straw, seaweed, dried grass clippings, peat moss, compost and aged manure.

- Vary bedding in the bin to provide more nutrients for the worms and to create a richer compost.
- Add two handfuls of sand or soil to provide grit the worms need to digest the food waste.

- Fill the bin with a mixture of damp bedding so that the overall moisture level is like a "wrung-out sponge."
- Lift the bedding gently to create air spaces. This helps control odours and gives the worms freer movement.

3. The Worms

Redworms, commonly known as red wiggler, brandling, or manure worms, are best for composting because they thrive on organic materials such as food scraps. Regular garden and compost worms will not survive in worm bin conditions and should not be used.

Redworms can be purchased or obtained by:

- Contacting the Nanaimo Recycling Exchange at 250-758-7777
- Ordering them on-line from websites such as **www.compostworms.ca**
- Collecting them from a friend's worm compost bin, or aged manure pile at horse stables or farms

Composting 500 gm of food waste per day requires 1 kg of worms (roughly 2000). If you are unable to get this many worms to start with, reduce the amount of food waste you add until the worm population increases accordingly.

www.ecoyardfarming.com

4. The Food Waste

Acceptable	*Unacceptable* (To avoid pests and odour problems)
YES	**NO**
Coffee grounds, tea bags and leaves	Grease, cooked food, including rice, pasta
Eggshells (rinse and crush)	Fish, meat, bones
Vegetable and fruit scraps (Cut into pieces for faster composting)	Dairy products Salad dressing

Did you know?

Your garden will benefit from the humus produced by composting. Adding compost will improve the texture of clay and sandy soils and restore essential nutrients. Your flowers, plants and vegetables will thrive!

After adding worms to your bin feed them by:

- Pulling aside some of the bedding, putting in food scraps and recovering with bedding material.
- Burying successive loads in different locations in the bin.

Harvesting your compost

In two to three months there will be little or no original bedding visible in the bin. When the contents are brown and earthy-looking, it's time to remove some of the finished compost.

• Quick Method

The quickest method is to shift the finished compost to one side of the bin, put new bedding in the space created, and place food waste in the new bedding. The worms will gradually move over and the finished compost can be skimmed off as needed.

• Some Fuss

If you have the time or want to use all of the compost at once, dump the entire contents onto a large plastic sheet and separate the worms manually.

Most children love to help!

Watch for the tiny lemon-shaped worm cocoons that contain up to 20 baby worms. Separate and store the finished compost in plastic bags. Return the worms and cocoons to the bin, and mix some finished compost in with the new bedding.

Use your finished compost as a soil conditioner for houseplants, gardens or lawns.

Common problems and solutions

Unpleasant Odours

Overloading your bin with food waste may result in unpleasant odours. Here are some solutions:

- Gently stir the bin contents to allow more air in.
- Stop adding food until worms and microorganisms have broken down the food in the bin.
- Check the drainage holes to ensure they're not blocked and drill more holes if needed.
- If the moisture level seems right, the bedding may be too acidic from too many citrus peels and other acidic foods. Adjust by adding a little lime and reducing acidic wastes.
- Collect your food waste in a covered container.

Fruit flies

Discourage fruit flies by burying food wastes and not overloading the bin. Keep a plastic sheet, piece of old carpet or sacking on the surface of the compost in the bin. If flies persist, move the bin to a location where flies will be less bothersome.

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