



VERMICOMPOSTING BASICS

Worms used for composting are different than the large earthworms commonly found burrowing in San Diego backyards. Red worms are smaller, and are well-adapted to the conditions inside a vermicompost bin. Unlike the earthworms that freely enter a traditional compost system, vermicompost worms must be intentionally added to a worm bin. Red worms are voracious eaters, consuming up to half their body weight in organic material every day and excreting it in the form of castings, a nutrient rich soil amendment that plants love.

Besides the bin itself, four basic ingredients are required for vermicomposting: BEDDING, FOOD, WATER & AIR. These elements help to maintain an environment where both red worms and their composting associates (see Vermicompost Critters) will thrive.

BEDDING + FOOD + WATER + AIR

BEDDING *The primary materials added to the bin during set-up, bedding provides a medium for the worms to move through that will not get compacted, can hold moisture, and is easily digestible. All bedding material will eventually be processed into castings.*

FOOD *The primary materials added to the bin after initial set-up, food scraps should be chopped small and buried in the bedding on a regular basis. The majority of inputs should be fruit and vegetable scraps, which will eventually be processed into castings. See Worm Menu for more details.*

WATER *Worms require a moist environment to survive. Slowly add water to the bin as needed, working to maintain the moisture level of a wrung-out sponge. If your bin is located in direct sunlight, or in a warm climate, be mindful of the need to water more frequently.*

AIR *While air will naturally enter the bin as you dig to add food scraps, a worm bin should have air holes on the top and/or sides to prevent the development of smelly, anaerobic conditions. Air is also important to support the microbial populations working inside your bin.*

SETTING UP YOUR BIN

To get started, you need to make or purchase a bin specifically designed for vermicomposting. These bins are generally 10" to 15" deep, opaque, have a tight fitting lid, and have holes drilled in the bottom and sides for drainage and ventilation. Create a damp bedding for your worms by soaking and wringing out torn newspaper, napkins, paper towels, and/or coconut coir. The amount of bedding you add will determine the amount of castings you will receive, but aim for at least 6 inches of depth. Add your worms and a handful of food scraps to the bedding, burying food below the surface. Feed your worms slowly at first, and gradually increase the amount of food scraps you provide. With good conditions, the worms will eat and reproduce rapidly. Worm communities are self-regulating and will adapt population size to available space and food resources. Worm bins operate optimally at an internal temperature of 55°F-75°F, but must be kept between 32°F-95°F to ensure worm survival. Keeping a bin indoors or locating an outdoor bin in the shade will help regulate temperature and moisture levels.

WORM MENU

| FREELY ADD | ADD IN SMALL PORTIONS | AVOID ADDING |
|---|---|---|
| Fruit and Vegetable Pieces and Peels (<i>chopped</i>) | Citrus Pieces and Peels | Inorganic Materials (<i>i.e. plastic, metal, glass</i>) |
| Coffee Grounds and Filters, Tea Bags | Spicy Foods (<i>i.e. onions, hot peppers</i>) | Meat, Poultry, Fish, and Bones |
| Moldy fruits, Vegetables, and Breads | Plain Bread, Cereal, and Pasta | Dairy products and Eggs |
| Egg Shells | Miscellaneous Plate Scrapings | Very Oily and Salty Foods |
| Shredded Paper Products | Leaves and Yard Waste | Glossy/ Shiny Paper |

VERMICOMPOST CRITTERS

Your bin will host not just red worms, but an entire community of decomposer organisms. Bacteria, fungi, and other microorganisms will naturally enter the bin and assist with decomposition. Outdoor worm bins are likely to attract small groups of macroorganisms, including potworms, ants, woodlice, soldier flies, and slugs. All of these organisms are beneficial, and will co-exist with the worm community. Red centipedes are the exception, and should be removed to prevent predation on the resident worms.