

## Vermiculture

Vermiculture, also called “worm farming,” is the process of using worms to transform organic material into nutrient-rich compost. The product left from the vermiculture is called vermicompost or “worm castings.” These worm castings can be used in two ways, directly as a soil amendment or as a compost tea which allows plants to easily access the microbial mass that is in the castings.

Vermicomposting is a great way to divert kitchen waste into compost rather than the trash can. In the Mesa County Waste Audit, published in 2019, more than 32% of waste going to the landfill in Mesa County is food and yard waste that can be composted. Vermicomposting is one solution to diverting waste away from the landfill while producing valuable compost.

The best part about vermiculture is that the worms do the work! Organic waste such as kitchen scraps is added to worm bins and the worms begin eating microbes off of the organic material which basically breaks it down. As the worms pass waste through their system, those “castings” are collected. If any moisture pools, it is drained off and discarded; this moisture is a leachate which is antimicrobial and not useful. The castings are used to place on the garden or are made into compost tea.

Castings are beneficial for the garden because they are naturally surrounded by a mucus produced by the worm. The mucus helps bind with the soil and keeps the nutrients in place longer in the soil as opposed to a spray or a mist would. The castings also contain nutrients to enhance soil. Worm castings are naturally rich in nitrogen, potassium, calcium, phosphorous, potash and magnesium. They also contain many trace elements and micronutrients that are essential for healthy soil including magnesium, copper, zinc, manganese, cobalt, borax, iron, and carbon. Worm castings are naturally balanced, full of bio-accessible nutrients, and can be used to dress plants, build potting mix, or make compost tea.

Red wiggler worms are the worm of choice because they prefer loose soil toward the top level of the soil. These worms don’t tend to be tunneling worms. Red worms are not garden worms, they are actually composting worms and usually found in manure piles and decomposing matter. Though smaller, red wigglers are aggressive composters and can eat half their body weight in one day. Food for the worms is placed on the top of the bin drawing the worms toward the food and leave the castings behind.

Many great tutorials online show how to build and maintain a worm farm at your home. From a small bin under the kitchen sink to a larger outdoor operation, vermiculture is versatile and effective – and when well kept, it has no odor other than rich, healthy soil.

## **Vermicompost Video Resources**

<https://www.youtube.com/watch?v=uuklmXODrGU>

<https://www.youtube.com/watch?v=AF-jzWKMdwE>

## **Vermicompost Website Resources**

<https://happydiyhome.com/vermiculture/>

<https://sam.extension.colostate.edu/wp-content/uploads/sites/2/2016/05/vermicompost.pdf>

## **Recourses from the MCPLD Collection**

### **Adults**

Compost city: practical composting know-how for small-space living

Composting inside and out: 14 methods to fit your lifestyle

The best place for garbage: the essential guide to recycling with composting worms

Worms eat my garbage

The complete guide to working with worms: using the gardener's best friend for organic gardening and composting

The complete compost gardening guide: banner batches, grow heaps, comforter compost, and other amazing techniques for saving time and money, and producing the most flavorful, nutritious vegetables ever

Composting for a new generation: latest techniques for the bin and beyond

Worms & wormeries: composting your kitchen waste-- and more!

### **Children**

Winnie Finn, worm farmer

Garden wigglers: earthworms in your backyard