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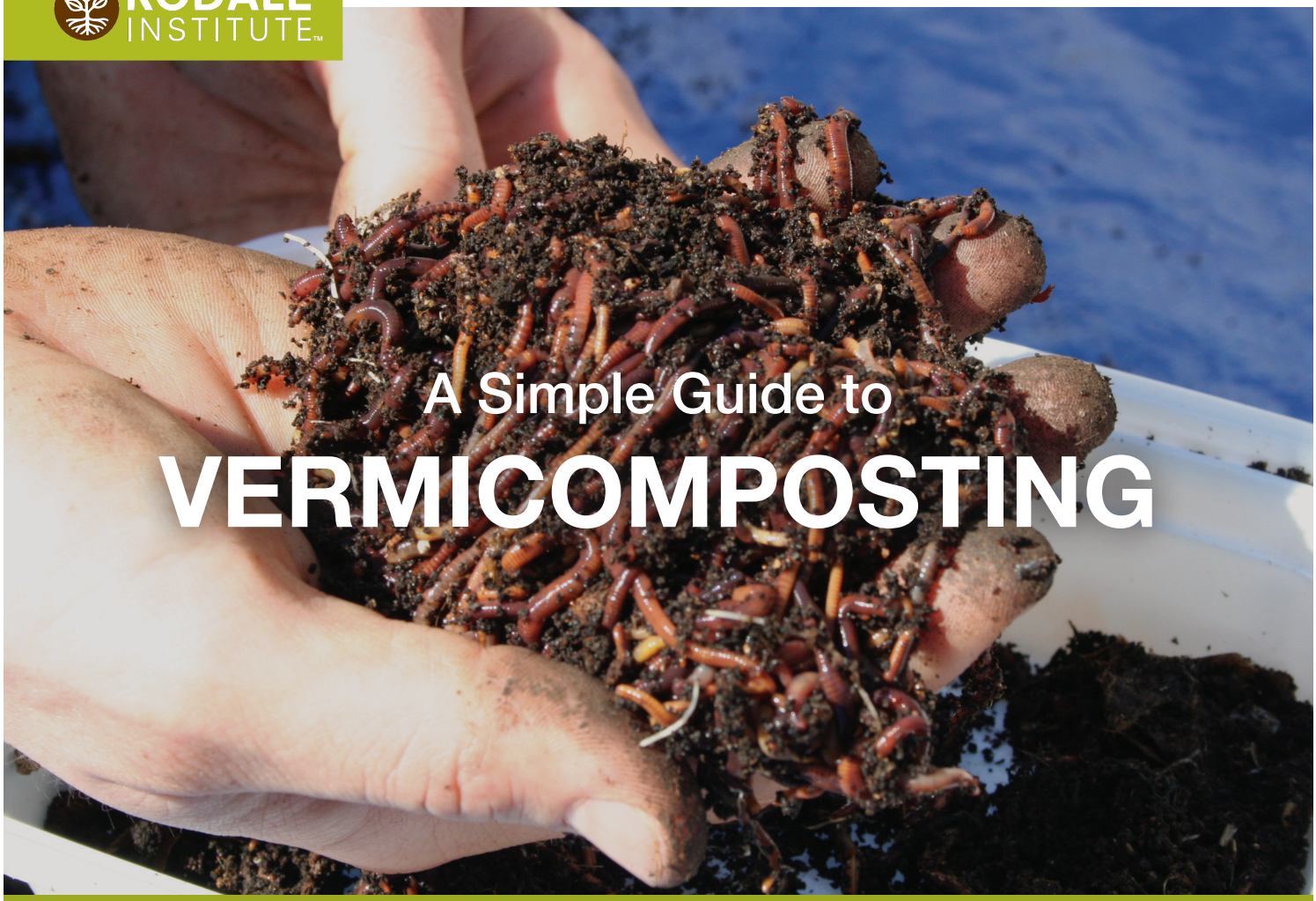

A Simple Guide to VERMICOMPOSTING

Solid waste generation in the United States continues to rise at a steady rate.

Yard debris and food waste combined account for nearly 30% of the materials disposed in U.S. landfills.

These materials can be easily composted. However, backyard composting may not be an option for everyone. Therefore, vermicomposting becomes an attractive alternative.

WHAT IS VERMICOMPOST?

Vermicompost is the product of earthworm digestion and aerobic decomposition using the activities of micro- and macroorganisms at room temperature.

Vermicomposting, or worm composting, produces a rich organic soil amendment containing a diversity of plant nutrients and beneficial microorganisms.

Vermicompost can be mixed with potting media at a rate of 10% by volume or else added directly into your soil; both options will provide plants with valuable organic matter, nutrients, and a diversity of beneficial microbes.

HOW IT'S DONE

EARTHWORM BIOLOGY

Worms commonly known as **redworms** or **red wigglers** are preferred because they reproduce rapidly, are communal and tend to remain on the surface while feeding. Under ideal conditions, a worm bin population can double about every 2 months. However, the population of a worm bin is controlled through nutrient/food availability and space requirements.

BUILDING A WORM BIN

There are several bins that can be used to raise earthworms. Some of the more common are plastic bins of various sizes. Bins made from 1-2 inch thick Styrofoam have proven to be a suitable alternative to plastic bins with the added advantage of better insulation. Bins should be well ventilated and should be raised off the ground with long stakes so that air may flow under the bin. Place the bin in a cool dark location with minimal temperature fluctuations, will not freeze or become excessively hot during the summer. Basements are typical locations but under a kitchen sink is also suitable.

MANAGING A WORM BIN

Worms benefit from the fewest disturbances as possible. Feed worms leftover fruits and vegetables and other kitchen prep waste, placed under shredded newspaper. **Do not feed worms meat, dairy, fatty, oily, or fermented products** as these will attract pests, harmful bacteria, foul odors and cause worms to leave the bin. Moist, shredded newspaper will need to be replaced throughout the life of the worm bin so that the food waste is always covered. This will prevent fly nuisances and reduce issues with odors. As the worms consume food waste they excrete dark, almost black casts, or worm poop, which is the product of vermicomposting. Castings are dense in nutrients and microorganisms and are highly regarded for plant production.

TROUBLESHOOTING

A number of causes can lead to worm losses, foul odors, pest and fly nuisances, but anticipating issues and quickly troubleshooting back to a balanced worm bin will ensure success. Bins that are too wet may generate foul odors as food materials are being decomposed anaerobically or else encourage fruit fly outbreaks. Bins that are too dry will reduce worm feeding and growth. Lastly, avoid overfeeding and especially food materials that should not be put into a worm bin.

Interested in more information?

Rodale Institute: www.rodaleinstitute.org

Worms Eat My Garbage by Mary Appelhof

Master Composters of Tompkins County-Tompkins County Cornell Cooperative Extension: www.ccetompkins.org/gardening/composting

Advancing Sustainable Materials Management: 2013 Fact Sheet. US Environmental Protection Agency. www.epa.gov/smm/advancing-sustainable-materials-management-facts-and-figures

Uncle Jims Worm Farm: www.unclejimswormfarm.com