Biology of composting worms

* Best worms for composting: the worms that live near surface litter/soil
* They are usually small in size with high metabolic and reproductive rates and short life cycles
* Examples: Eisenia fetida (“brandling’, “tiger” earthworm); Eisenia andrei (“red” worm)
* Composting worms can be described as small compost piles
* Organic matter passes through the gizzards of worms and becomes finely ground prior to digestion
* Microbes that live inside the worms ‘ gut decompose the finely ground organic material
* Decomposed organic matter passes out of the earthworms body in the form of casts
* As worms feed on organic matter, they also act as little plows: they aerate the substrate and enable water , nutrients, oxygen to move through it
* Vermicompost, the end product of vermicomposting, is a finely divided peat-like material with high porosity and water-holding capacity and a low C:N ratio (nitrogen rich)
* Vermicompost also contains large amounts of plant growth hormones

Is vermicompost better than compost ?

* **No** but vermicompost is usually richer in bacteria and certain organic compounds and plant hormones
* In order to decide which is better , we have to know what organisms are needed in your soil, what carbon compounds are needed around the roots of your plants to grow beneficial bacteria and fungi
* Vermicompost is usually richer in bacteria and can be applied to vegetables and tomatoes
* Worms cannot digest wood chips. Compost piles are better suited for the decomposition of wood chips and produce a fungally dominated compost that can be applied around fruit trees
* The regular composting process is suitable for the decompositon of large amounts of material that are produced in large batches (woody material from pruning being an example). Vermicomposting is suitable for continuous small batches such as fruit residues and coffee grounds.