



## **Fundamental Difference between Compost and Earthworm Manure or SML Microbial Organic Fertilizer**

By Dr. Sinan Ogun – Feb. 2023

It is a known and accepted fact, all around the world, that worm castings or worm manure is the best organic fertilizer there is. It is rich in nutrients and humus and this phenomenal manure will feed your soil and plants like they've never been fed before. But one problem is; it's time-consuming to produce in the amounts needed for commercial prode, and takes up a lot of space and as such; can end up rather expensive. Dr. Sinan Ogun an agricultural scientist, set out more than 30 years ago trying to replicate what takes place in a worms gut to produce an equally valuable organic fertilizer far more cost effectively to help improve our deteriorating soils and encourage a more sustainable agricultural production around globe.

He developed a mechanical procedure which replicates the biological process that takes place when a worm, with the help of microorganisms, turns organic matter into humus rich microbial organic fertilizer. The process which is presently pending a European patent, is a delicate combination of chippers, dehydraters, and bioreactors arranged to turn any organic matter (including biogas digestate and organic fraction of household waste) into high value, ecologically friendly microbial organic fertilizer within 24 hours.

### **Difference between Compost and Microbial Organic Fertilizer:**

1. Biogas Digestate (BD) is a product which is not fully fermented, and there is a problem of secondary fermentation after application to soil, which can cause burning of seedlings and generally has odour, but these problems do not exist with earthworm manure or our SML Microbial Organic Fertilizer. We take the BD and further treat it with our patented process for 24 hours to produce a safe and far more valuable product.

2. BD does not convert all kinds of nutrients into simple substances that are simply and easily soluble in water; they are not easily taken up by plants. But our Microbial Organic Fertilizer is easily absorbed by plants because the beneficial microbes (bacteria, fungus etc.) have converted the decomposed organic matter into ready to be absorbed nutrient form for plants.
3. **Our Microbial Organic Fertilizer is a** strong agglomerate. It has strong water retention and drainage, and will not disperse and compact for long-term use because it is enriched with beneficial microbials, which is not the case for BD.
4. **Our Microbial Organic Fertilizer** contains antagonistic microorganisms, which can inhibit soil-borne diseases, but untreated BD does not contain such microorganisms and is therefore of less value to the farmer or the grower, who may need to resort to costly compounds for efficient production.
5. **Our Microbial Organic Fertilizer is** rich in Humus“ (Humic and Fulvic acid) and has a large number of beneficial microbial bacteria, 18 kinds of amino acids and various trace elements - these contents are rare in BD as it comes out of the biogas production plant. Our process converts the low value product into a high value product in just 24 hours. This in turn means that our **Microbial Organic Fertilizer is** not just beneficial to the environment but also to the users bank balance.

*“ Humus is a vital, yet small (2% by volume) part of healthy soil. It differs from organic matter in that humus has undergone humification - a process by which decomposed organic matter is reconstituted to form complex organic molecules that serve different purposes in the soil. These humic substances include humic acids, humin and fulvic acids.*