Overall Discussion

1.What is the difference between raw unit weight and bulk density? Discuss your results based on the laboratory experiment.

-The raw unit weight is the density given by the division of the mass of the compost over the volume of the compost. The bulk unit is the density given by the division of the mass of the compost over the volume of the container.

2. How can the ph affect the compost?

- The more acidic the soil is, the more inactive the bacteria are, and this bring plants to not grow properly. Vice versa for the basicity.

Compost microorganisms operate best under neutral to acidic conditions, with pH's in the range of 5.5 to 8. During the initial stages of decomposition, organic acids are formed. The acidic conditions are favourable for growth of fungi and breakdown of lignin and cellulose(*Monitoring Compost pH - Cornell Composting*, n.d.)

3. What is the impact of immature compost on plant growth, and how can this be assessed in the lab?

-Plants will not grow properly if the nitrogen cycle is not working. Indeed, it is generally accepted that compost produced with substrates rich in nitrogen will have a better fertilizing effect, compared to other compost whose substrates are mainly woody. Likewise, immature compost will have a repressive effect on seed germination and plant growth(Tamakloe et al., 2021). In the lab, we can do the germination test and for immature compost you have standard growth.

4. How do you calculate the bulk density of compost, and why is this measurement important in the composting process?

-Divide the mass of the compost by the volume of the container. Bulk density provides an overall indication for the physical and aeration conditions of a composting mass(*Bulk Density - an Overview | ScienceDirect Topics*, n.d.).

*Bulk Density—An https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/bulk-density# overview | ScienceDirect Topics*. (n.d.). Retrieved 29 October 2024, from https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/bulk-density#ß

*Monitoring Compost pH - Cornell Composting*. (n.d.). Retrieved 29 October 2024, from https://compost.css.cornell.edu/monitor/monitorph.html#

Tamakloe, M., Koledzi, E. K., Aziable, E., Tcha-Thom, M., & Krou, N. M. (2021). Impact of Composts Maturity on Growth and Agronomic Parameters of Maize (Zea mays). https://www.scirp.org/journal/paperinformation?paperid=107338