Invertebrate populations are indicators for compost quality and progress

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Scarabaeus viettei (syn. Madateuchus viettei, Scarabaeidae); picture taken in dry spiny forest close to Mangily, western Madagascar. Credit: Axel Strauß/Wikipedia

Researchers in Nigeria are investigating how organic composting of cow rumen and vegetable waste affects macro-invertebrate populations at a market composting site. Composting is an important way to deal with such waste and the changes in populations of flies (Diptera), beetles (Coleoptera), and mites and ticks (Acarina), can act as a useful proxy for how well the process is working. The shifting populations coupled with physical and chemical examination can then be used to fine-tune the composting process for best end results.

Oluwatobi Oni of the University of Ibadan and his colleagues point out that it is critical that waste generated by people is managed properly whether it is of animal or other origin. The team points out that improper management can lead to the formation of breeding sites for pathogen-carrying invertebrates, such as malaria-bearing mosquitoes.

The presence of waste in a market might also lead to food poisoning and diarrhea, surface and groundwater contamination, the emergence of diseases such as cholera, poor indoor and outdoor air quality, and even increase the risk of flooding. As such, better methods of waste management are high on the agenda in the developing world, for instance.

"It is certain that composting remains important in the management of organic waste, especially in this part of the world and extensive study is proposed as regards species biodiversity associated with the different composting stages and their impact on compost quality," the team concludes.

More information: Taiwo Hammed et al. Macro-invertebrate population changes during composting of organic waste at Alesinloye market Ibadan, *International Journal of Agriculture Innovation, Technology and Globalisation* (2019). DOI: 10.1504/IJAITG.2019.10024157

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