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VARIATION OF COMPOST PEDOFAUNA WITH CARBON INPUT AND WATERING LIQUID

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Abstract

The current study was carried out at Bouzeguène's psychoeducational center (Tizi Ouzou, Algeria), with a focus on the monitoring of compost pedofauna in relation to carbon inputs (dead leaves, paper-cardboard, and olive pomace) and watering liquids (water, lactoserum, and vegetation water). These composts were created by valorizing the organic fraction, which constituted 60 to 70% of household and similar waste. Nine tests were run to monitor the composting process. Two tons of organic waste were combined with 1.5 tons of three kinds of carbon waste. This mixture was composed of 50% nitrogenous matter and 50% carbon material. Three composters were monitored for each type of carbon material: the first was watered with water, the second with vegetation water, and the third with lactoserum. The analyzed composts contained eleven faunal groups. The average number of individuals varied between 356 ind/6250 cm^3 of compost mixed with dead leaves and watered with vegetation water and 9286 ind/6250 cm^3 of compost mixed with cardboard paper and watered with lactoserum. Mites dominated the nine substrates, with an average density of 99% in composts containing cardboard paper, as well as those mixed with olive pomace, and watered with lactoserum. They were followed by *Diptera* and *Coleoptera larvae*, with the remaining faunal groups under represented or absent, most likely due to inter and intraspecific competition and predation. Our findings revealed that watering with vegetation water encouraged the formation of a larger number of faunal groups.

Key words: Bouzeguène, composting, organic waste, pedofauna

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