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STATISTICAL VALIDATION OF ORGANIC AMENDMENTS BASED ON OLIVE-GROWING WASTE ON THE QUALITY OF MOROCCAN SOIL

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Abstract

Solid waste management has become a thorny issue these days, especially olive-growing waste from olive crushing. In Morocco, this waste is produced at worrying rates without any treatment, which has an impact on environmental systems. Composting this waste is a common practice in several countries, to benefit from its enriching values, both for the soil and for agricultural crop production. This work aims to statistically analyze the results of the effectiveness of two composts on soil fertility as a function of their assimilation time. To do this, the soils were evaluated by physicochemical analyses of samples taken from three different soils: S_1; previously amended soil; S_2: soil never amended and S_3: soil from Sefrou (Douar Aghbalou Agorar). Three organic amendments were studied: two composts made from olive mill wastewater (OMW), olive-growing waste (OMW + olive pomace; OW), and manure were applied to the three soils. These results show that transforming olive-growing waste into organic soil improvers helps to improve soil fertility and can replace commercial chemical fertilizers, which destroy the quality of Moroccan soils, by guaranteeing the presence of the nutrients needed by the soil.

Key words: assimilation time, effect, olive-growing waste, OMWW, organic amendments, physicochemical analysis, soil fertility, statistically

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