

Scientific Tracks

Use of municipal organic compounds and biochar as components of substrates to produce seedlings

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The deployment of solar panels on homes in Qatar is a new trend. This work aimed to develop coir-based substrates, with low environmental impact, using municipal solid waste (MSW), collected selectively, and biochar, to produce lettuce and spinach seedlings. In effect, tests were carried out, in which the proportion of the components and compositions of the mixtures were successively changed. The addition of pine bark and peat improved the characteristics of the mixtures. Coir-based substrates (73%, V/V) and 12%, V/V of MSW, and the remaining volume with 5%, V/V of pine bark and 10%, V/V of peat, or 10%, V/V of biochar and 5%, V/V of peat, are suitable for seedling growth. The content of photosynthetic pigments and phenols

varied with the mixture, which may influence tolerance to abiotic stresses after transplantation. In the future, its influence on seedling growth after transplantation should be evaluated

Biography: Tiago Martins is an agronomist. He obtained a degree in Agronomy from the University of Évora (2019). In 2022, he obtained a master's degree in Agricultural Engineering from the same institution, where he developed his master's thesis on municipal organic compounds and biochar as components of substrates to produce seedlings. Currently he works with berries. In the future he intends to obtain a doctorate in agricultural sciences.

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