



Turning Waste into Wealth? The case of Date Palm Composting

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ABSTRACT

In Figuig (an oasis in Morocco), date palm (*Phoenix Dactylifera* L.) cultivation generates 8500 tones/year of dry palm residues as by-products. This represents an opportunity for sustainable waste management through composting. The present study investigates the economic viability of a composting station dedicated to the recycling of date palm by-products by evaluating the agronomic quality of the compost, conducting a socio-economic survey of local farmers, and performing a detailed cost analysis to determine the station's economic sustainability. Agronomic tests confirmed the compost's quality, demonstrating its ability to enhance soil fertility and support sustainable agricultural practices in the oasis. The socio-economic survey examined the characteristics of local farmers and their willingness to adopt composting technology. The cost analysis provided a thorough breakdown of the station's operational and investment expenses, revealing its potential to create jobs and generate positive environmental, economic, and social impacts. This study highlights the value of circular agriculture approach in improving rural livelihoods and promoting environmentally sustainable practices, making it a cornerstone for replicable, scalable solutions in similar agro-ecosystems in Morocco and in other countries.

Keywords: Agriculture; Business model; Circularity; Fertilization