

COST BENEFIT ANALYSIS OF THE PRODUCTION AND APPLICATION OF THE CONDENSE COMPOST

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EXECUTIVE SUMMARY

Carbon addition to soils is an essential agro-ecological practice to enhance soil functions such as resource provision, flood attenuation and carbon and nutrient storage as well as below ground biodiversity. The use of manure and compost amendments enhances the soil benefit from carbon addition in contrast to inorganic fertilizers. Subsequently composting of organic waste can lead to a new product, capable to complement or replace the use of mineral fertilizers. Compost has been proved to have a number of positive characteristics in agricultural applications. Compost application to soil improves the its physical, biological and chemical properties, increases organic matter sequestration and its water retention capacity, reduces erosion, and improves soil's physical structure. Within the framework of the Life+ project CONDENSE, a high nutrient novel product, which can be safely and easily used, in all ranges of agriculture and horticulture, replacing in a significant scale inorganic chemical fertilisation was developed. This product is the result of condensing olive mill wastewater (OMWW) on manure compost and creating the CONDENSE compost with high nutritional value. In this study, a cost benefit analysis was performed using data from the implementation (economical as well as environmental) of the CONDENSE Managing System. Specifically, the economical characteristics of the CONDENSE Managing System (both the solar drying of the OMWW as well as the composting process) and the CONDENSE compost were evaluated using a Cost-Benefit Analysis. A techno-economical analysis evaluated potential alternatives of full scale application of the CONDENSE Managing System. The basic scenario of a large scale system was built around the idea of having the solar drying units distributed next to the Olive Mills, the condensed OMWW to be transported to a central composting unit and the final composting and packaging to take place at a central location. The economic viability of the CONDENSE compost was demonstrated.

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