

The CONDENSE managing system for the production of novel fertilizers from OMW and manures

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Within the framework of the LIFE+CONDENSE project, a high nutrient novel product has been developed, which can be safely and easily used, in all ranges of agricultural and horticultural practices, replacing in a significant scale inorganic chemical fertilisation. The CONDENSE process is a combination of two simple and low cost waste management technologies, that of Solar Drying and Composting. It also utilizes two very common, in the overall Mediterranean region; agricultural and agro-industrial wastes that of manures and olive oil mills wastewater (OMW). Experiments and trials conducted in the pilot unit developed in Vasilaki, a village near the city of Pyrgos, in the Region of Western Greece. The unit includes a solar drying greenhouse and a composting floor. The final product occurred from the pilot unit in the demonstration area is an organic fertilizer with significantly increased concentrations of Potassium (primary), Nitrogen and Phosphorus, higher than ordinary organic fertilizers and almost similar to mineral fertilizers. The final products characteristics are N/P/K : 7/4/19.

The final product evaluation carried out in various cultivations such as, olive grove, vineyard, pepper cultivation, wheat cultivation, tomato, potato, lettuce, strawberry, cucumber and rapeseed cultivation. The results showed that the product is an organic potassium fertilizer, with no toxicity to plants (no phenols phytotoxicity), enriching the soil with organic matter. In combination with inorganic nitrogen fertilization can be competitive to a full chemical fertilization required to crops. This paper will present data from both the production process as well as the utilization in peppers, strawberries, etc.



Picture 1. Solar drying unit and composting floor in the pilot unit in Iliia and the final product

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