

The Use of Synthetic Soil for The Vegetables Cultivation in Conditions of Limited Water Consumption

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Abstract : The use of synthetic soil for the vegetables cultivation in conditions of limited water consumption The separate collection of urban organic waste and green waste for the countries of the European Union averages 100 kg / inhabitant x year with an annual growth of about 10%. The production of quality compost averages 38% - 40% of the production of organic waste material. Most of the compost produced is used as an organic soil improver in those nutrient-poor soils in order to improve its quality. This study seeks to enhance the production of quality compost by creating a synthetic soil, where the percentages of compost on average oscillate between 50% and 60% in which, with appropriate precautions, different species of horticultural can be grown in conditions of high environmental safety without the use of pesticides and with a consumption of water used for irrigation limited to the actual evaporation of the plants. The project started in 2018 and is still ongoing, confirms its validity through a series of different horticultural productions, especially if this technology is applied where the availability of land suitable for the cultivation of vegetables is limited and where the use of water for irrigation represents a cultural criticality. Furthermore, the creation of "open field" crops, together with their automation, represents a further possibility in the concrete development of such technologies, giving the final product organoleptic characteristics equal if not superior to what the market offers today for human nutrition.

Keywords : water scarcity, compost, vegetable foods, syntetic soil

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