



Biomass Composting and Agronomic and Environmental Effect Evaluation[#]

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Abstract: The smooth functioning of the organic agricultural systems depends on the recycling of elements which might be realized through fertilizing and the behaviour of the organic matter. The fertilization strategy in the organic agriculture is intended to preserve the sustainable upgrading of fertility in land. The achievement of such an objective by using the biomass wastes accumulated on the farm (such as the stable organic matter (dung), the wastes from pruning or any other organic) through the composting process, by helping in the break-down of the organic matter. The biomass wastes created on the farm can not be used directly for fertilization since they might contain a huge quantity of seeds from wild plants and other harmful parasites to the agricultural crops, and they might reduce in a blatant way the oxygen in the land and might release quantities of toxins into the roots of plants. Hence, organic matter will have to be brought into land without causing any of the ‘concerns’ mentioned above. The study aims to realize composts at the farm level and to evaluate the agronomic and environmental effects of its implementation in the methods of organic cultivation which was carried out in the framework of Program of Community Initiative PAB Interreg III A- Italy-Albania through an integrated project for disseminating the technical assistance in implementation of methods in making organic produce. The application of composts was done in two demonstrative farms: at the Agricultural University of Tirana and on the “Esat Bodli” farm in Dures, Albania. The demonstrative farms were determined on the basis of several specifications: a) availability of biomass and wastes in adequate quantities given the aim and the Albanian agricultural reality and b) possibility of implementing in the field the composts produced. In preparing the heaps (stacks), the composting process has been monitored through the registration of temperature and on the basis of the temperature readings and the behaviour of rainfalls, decisions were made concerning the administration (turning and mixing) of biomass. At the end of the stage of composts, the analytical control of the final product was done in Italy, since the Albanian legislation does not foresee normative references for quality of composts. Moreover, the Albanian contributors, specialized in the control of chemical fertilizers, did not possess the equipment needed to conduct such specific analysis on biomass. The analysis have indicated that the composts produced was within the range as determined by the Italian legislation, and could be used with no obstacle for tests following fertilization.

Key words: *composting, Progetto PAB Interreg III A Italia – Albania, organic agriculture*

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