



The role of bioplastics in organic waste recycling

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Introduction

Organic waste represents worldwide the largest fraction of MSW, ranging from 30% to more than 65% of the quantities produced in cities, according to the income level, the living standards and the consumption habits.

The capability to realize consistent schemes for collecting organic waste and sent it to recycling in industrial compost and biogas facilities represents the back-bone of success cases and best performing management experiences of waste produced in cities.

Compostable plastics have proven to be successful in enhancing both the quantities and quality of separate collected organics and especially when applied for the separate collection of kitchen- or foodwaste; but the complexity of organic waste recycling and the range of properties of different types of bioplastics have to be matched in advance before considering a joint recycling path for both types of wastes to guarantee the quality of the outputs (i.e. compost or digestate)

Outline

The lecture will start by providing an overview of the different types of biodegradable plastics, their properties and their role in the management of organic wastes. We will then focus on compostable plastics suitable for recycling in industrial-scale biological treatment facilities, according to existing technical standards.

The discussion will then focus on showing examples about the possible application of different types of compostable packaging in a win-win approach so increase the quantities of organic waste collected and the effective inclusion of compostable packaging into the organic recycling process.

Data and examples quoted will mainly focus on experiences from EU countries.



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Acknowledgments:

The topics of organic recycling including biodegradable plastics are regularly debated between the experts of the ISWA WG on biological treatment of waste; the basic concepts about compostable plastics are summarised in the ISWA Key Issue paper “Biodegradable Plastics: An Overview of the Compostability of Biodegradable Plastics and its Implications for the Collection and Treatment of Organic Wastes”, that can be downloaded from www.iswa.org

Biography

Marco Ricci has a University degree in solid state Physics and a master in Economy of Environmental Resources of the University of Perugia and Luiss (IT). He has more than 27 years of experience in promoting circular economy schemes for organic waste recycling, and the inclusion of specific types of compostable plastics. Marco is author and co-author of a number of National and international Publications realised for ISWA international, UNEP and the FAO. He is senior expert at the Italian Compost and Biogas Association, MD of Altereko sas consulting, Chair of the ECN Task Group on compostable plastics, member of the STC of ISWA and member of STC of Ecomondo, the largest fair about circular economy and sustainability in the Mediterranean.