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**AGROINDUSTRIAL WASTES AS POTENTIAL FEEDSTOCK
FOR THE PRODUCTION OF BIO-BASED CHEMICALS
AND BIOPOLYMERS**

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Abstract

Agroindustrial waste management have held a key position in R&D in the last decades. First investigations put much of their effort in the limitation of the toxic effects due to the persistence of potential hazardous compounds in the environment, the massive production of such wastes, their biochemical stability and/or their release in a limited area or time frame. Then, bioconversion and/or recover of specific fractions of some of these biowastes was found attainable, leading to the report of numerous successful attempts to produce high added-value compounds, bio-based chemicals, materials and fuels with a biocompatible approach. To date, the use of agroindustrial wastes as renewable feedstock through multi-step integrated processes is considered mandatory to allow their extensive valorisation.

For instance, several studies were dedicated to the exploitation of the wastewaters deriving from the production of olive oil, wine, beer and milk, and the solid waste due to wheat bran processing. In the present work, the main aspects describing the impact of these biowastes were evaluated. In particular, the amounts produced yearly, the area of production, seasonality, stability and transportability were considered along with their chemical and biochemical features, microbial composition, and presence of mycotoxins, allergens, pesticides and heavy metals. These information aims at providing a wide comprehension of the most suitable processes to be assessed in order to design an economically and environmentally sustainable biorefinery of the examined biowaste.
