

Zero waste management of spent mushroom compost

ABSTRACT

Edible mushroom are grown commercially using lignocellulosic waste by applying a biological process. However after the harvesting season about 70% of the substrate remain as a spent mushroom compost (SMC). SMC can be the source for retrieving value-added products which support zero waste approach. In this paper, the fate of SMC from agricultural production will be discussed focusing on its utilization. Based on the previous reports, major uses of SMC were in the agricultural field as mushroom media, animal feed, plant compost, fertilizer and others. Extended usage of SMC, i.e., for second cultivation is proposed in this review. In addition, the SMC was also applied in renewable energy production, e.g., feedstock for biogas, bioethanol or biohydrogen.