

1. Record Nr.	UNINA9910409695103321
Autore	Hasan Masud Mahadi
Titolo	Sustainable Food Drying Techniques in Developing Countries: Prospects and Challenges // by Mahadi Hasan Masud, Azharul Karim, Anan Ashrabi Ananno, Asif Ahmed
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-42476-6
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XX, 189 p. 108 illus., 107 illus. in color.)
Disciplina	641.44
Soggetti	Microbiology Food - Biotechnology Energy policy Thermodynamics Heat engineering Heat - Transmission Mass transfer Food Microbiology Food Science Energy Policy, Economics and Management Engineering Thermodynamics, Heat and Mass Transfer Deshidratació d'aliments Enginyeria sostenible Microbiologia dels aliments Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Insights into Drying -- Energy Requirement in Drying -- Energy Scenario in Developing Countries -- Existing drying Technologies in Developing Countries -- Proposal of Sustainable drying techniques in Developing Countries -- Challenges in Drying Sector -- Conclusion.
Sommario/riassunto	This book presents a comprehensive review of renewable energy-based sustainable drying techniques for developing countries. Aspiring

towards a world with zero food waste, the book has provided discussion on sustainable drying techniques in terms of energy efficiency. The socio-economic condition of each developing country is unique; therefore, has specific technological requirements. As such, the book presents discussions on food waste scenario around the world, the socio-economic status of developing countries and their correlation with food. The book gives an overview of the quality aspects of drying, along with the required energy and time to retain these features. Additionally, a method of selecting drying techniques for developing countries, taking the cost and safety factor into consideration, has been discussed extensively. Also, the renewable and non-renewable energy resources of low income, lower-middle income, middle income, and high-income developing countries have been analyzed and presented. The book also highlights the available drying techniques that are currently being practiced by the consumers and industries of developing countries. The book recommends ten sustainable drying technologies for the developing countries and describes their working principle. Discussion on potential challenges for sustainable drying technology adoption is also presented. The book presents up-to-date research on sustainable drying techniques and their impact on developing countries to reduce food waste. Food waste is not only a humanitarian concern but also a threat to environmental sustainability. Currently, one-third of all produced food is being wasted, when nearly 805 million people - including children remain undernourished on a daily basis. In an effort to solve this crisis, a number of food preservations techniques are being practiced in food supply chain. Drying is one such preservation technique that prevents microbial proliferation, slows enzymatic reaction and preserves the physio-chemical properties of food. Albeit, drying is an effective means of food preservation; it is also highly energy-intensive. Developing countries do not have sufficient energy and financial resources to adopt conventional (expensive and high energy) drying techniques. As such, this is the first reference work dedicated to discussing the prospects and challenges of sustainable (renewable energy based and inexpensive) drying techniques for developing countries in order to reduce food waste. Sustainable food drying techniques in developing countries: Prospects and Challenges is a singular work in the field of food preservation and affordable drying technology. .
