

## Abstract

# Elevating Sustainability in Design: Advancing State-of-the-Art Food Drying Methods to Optimize Efficiency, Preserve Nutritional Value, and Minimize Waste in Contemporary Food Production <sup>†</sup>

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<sup>†</sup> Presented at the 3rd International Electronic Conference on Processes—Green and Sustainable Process Engineering and Process Systems Engineering (ECP 2024), 29–31 May 2024; Available online: <https://sciforum.net/event/ECP2024>.**Keywords:** modern; drying methods; quality; energy; utilization; efficiency

**Citation:** Johnson, N.; Chigozie, I. Elevating Sustainability in Design: Advancing State-of-the-Art Food Drying Methods to Optimize Efficiency, Preserve Nutritional Value, and Minimize Waste in Contemporary Food Production. *Proceedings* **2024**, *105*, 120. <https://doi.org/10.3390/proceedings2024105120>

Academic Editor: Dariusz Dziki

Published: 28 May 2024



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Drying foods is pivotal in food production, fostering ingredient exploration and product innovation. Recent advancements in pre-treatments, procedures, and cutting-edge technologies like microwave and ultrasound drying have reshaped the industry. These innovations not only boost efficiency and quality but also promote sustainability in food drying processes. By leveraging these state-of-the-art technologies, the food industry can embrace a more resource-efficient and technologically advanced approach to meet the demands of modern food production while preserving nutritional value and minimizing waste.

The promising advancements in drying technologies, such as microwave and ultrasound, boost efficiency and maintain product quality. To maximize their impact, wider dissemination and adoption of these technologies within the business sector are crucial. By embracing these cutting-edge drying methods, businesses can enhance sustainability, improve production processes, and ultimately increase profitability. This integration of advanced technologies aligns with the industry's goal of achieving efficient and sustainable food production practices.

The study aims to connect research with practical applications, showcasing the practicality and advantages of modern drying technologies for food sustainability. By embracing these innovative methods, businesses can play a key role in fostering a sustainable food system and gaining a competitive advantage in the market. This research seeks to empower businesses to implement cutting-edge drying technologies effectively, paving the way for a more sustainable and efficient future in food production.

**Author Contributions:** N.J.: did the literature review part of the research and the conclusion part of the research findings. I.C.: conceptualization of the project; design and development of the food drying system; and data analysis and interpretation. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** No new data were created or analyzed in this study. Data sharing is not applicable to this article.

**Conflicts of Interest:** The authors declare no conflict of interest.

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