

About the Book

The book *Organic Solid Waste Management: Rotary Drum Composting* offers a comprehensive examination of the rotary drum composter as an effective solution for managing organic waste. With a focus on decentralized systems, it emphasizes the benefits of on-site composting to reduce waste transportation's environmental and economic costs. The book explores the underlying science and engineering principles behind the rotary drum composter, highlighting its ability to create high-quality compost in a controlled environment. Various studies are presented, detailing its successful application in handling municipal solid waste, sewage sludge, agricultural residues, and weeds. Additionally, the text delves into key factors such as temperature control, aeration, and microbial dynamics that influence the composting process.

Real-world case studies from premier Indian Institutions, including the IITs and NITs, illustrate rotary drum composters' technological advancements and operational efficiencies. The book is an essential resource for researchers, environmental engineers, and practitioners interested in sustainable waste management techniques. It demonstrates the efficacy of rotary drum composters in diverse scenarios and underscore the need to optimize design and cost-efficiency to promote broader adoption.

Contents

- 1) Introduction to Solid Waste Management
- 2) Chronological Advancements in Composting
- 3) The ABC of Composting
- 4) Trending Techniques and Practices
- 5) Fundamentals and Rationale of Rotary Drum Composting
- 6) Aerobic Mineralisation of Organic Solid Waste
- 7) Biological Treatment of Industrial and Sewage Sludge
- 8) In-Vessel Valorisation of Invasive Aquatic Weeds
- 9) Agro-Waste and Terrestrial Weeds Stabilisation through Aerobic Degradation

10) Predicaments and Possibilities