Contents

Microbial Communities

How Resilient Are Microbial Communities to Temperature Changes During Composting?  
J.N. Cooper, J.G. Anderson and C.D. Campbell  
3

Survey of Fungal Diversity in Mushroom Compost Using Sequences of PCR-Amplified Genes Encoding 18S Ribosomal RNA  
17

Bacterial Community Structure During Yard Trimmings Composting  
F.C. Michel Jr., T.J. Marsh and C.A. Reddy  
25

Characterisation of Microbial Communities During Composting of Organic Wastes  
N. Riddech, S. Klammer and H. Insam  
43

Microbial Succession During Composting of Source-Separated Urban Organic Household Waste Under Different Initial Temperature Conditions  
I. Sundh and S. Rönn  
53

Bacterial Diversity in Livestock Manure Composts as Characterized by Terminal Restriction Fragment Length Polymorphisms (T-RLFP) of PCR-amplified 16S rRNA Gene Sequences  
S. M. Tiquia and F.C. Michel Jr.  
65

Amplified 16S Ribosomal DNA Restriction Analysis of Microbial Community Structure During Rapid Degradation of a Biopolymer, PHA, by Composting  
83

Comparative Investigation of Vermicompost Microbial Communities  
99
Processes and Controls

Heat Production During Thermophilic Decomposition of Municipal Wastes in the Dano-System Composting Plant

*J.E. Dziejowski and J. Kazanowska*

111

Composting of Different Horticultural Wastes: Effect of Fungal Inoculation

*M.A. Elorrieta, M.J. López, F. Suárez-Estrella, M.C. Vargas-García and J. Moreno*

119

Backyard Composting: General Considerations and a Case Study

*P. Illmer*

133

N-Dynamics During Composting – Overview and Experimental Results

*I. Körner and R. Stegmann*

143

Unsuitability of Anaerobic Compost from Solid Substrate Anaerobic Digestion as a Soil Amendment

*H.M. Poggi-Varaldo, E. Gómez-Cisneros, R. Rodríguez-Vázquez, J. Trejo-Espin and N. Rinderknecht-Seijas*

155

Pile Composting of Two-phase Centrifuged Olive Husks: Bioindicators of the Process

*G. Ranalli, P. Principi, M. Zucchi, F. da Borso, L. Catalano and C. Sorlini*

165

Organic Acids as a Decisive Limitation to Process Dynamics During Composting of Organic Matter

*T. Reinhardt*

177

Effects of Interrupted Air Supply on the Composting Process – Composition of Volatile Organic Acids

*M. Robertsson*

189

Reduction of Ammonia Emission and Waste Gas Volume by Composting at Low Oxygen Pressure

*D.P. Rudrum, A.H.M. Veeken, V. de Wilde, W.H. Rulkens and B.V.M. Hamelers*

203
Review of Compost Process-Control for Product Function
R.A.K. Szmidt

Using Agricultural Wastes for *Tricholoma crassum* (Berk.) Sacc. Production
*N. Teamroong, W. Sattayapisut, T. Teekachunhatean and N. Boonkerd*

Microbial Transformation of Nitrogen During Composting
*S.M. Tiquia*

Effect of Additives on the Nitrification-Denitrification Activities During Composting of Chicken Manure
*H. Yulipryanto, P. Morand, P. Robin, G. Tricot and C. Aubert*

**Biodegradability**

Biodegradability Study on Films for Packaging Based on Isotactic Polypropylene Modified with Natural Terpene Resins
*S. Cimmino, E. D’Alma, E. Ionata, F. La Cara and C. Silvestre*

Isolation and Characterization of Thermophilic Microorganisms Able to Grow on Cellulose Acetate
*F. Degli-Innocenti, G. Goglin, G. Bellia, M. Tosin, P. Monciardini and L. Cavaletti*

PCB’s Biotransformation by a White-Rot Fungus Under Composting and Liquid Culture Conditions
*G. Ruiz-Aguilar, J.M. Fernández-Sánchez, R. Rodríguez-Vázquez, H.M. Poggi-Varaldo, F. Esparza-García and R. Vázquez-Duhalt*

Tests on Composting of Degradable Polyethylene in Respect to the Quality of the End-Product Compost
*B. Raninger, G. Steiner, D.M. Wiles and C.W.J. Hare*

Microbial Degradation of Sulfonylurea Herbicides: Chlorsulfuron and Metsulfuron-Methyl
*E. Zanardini, A. Arnoldi, G. Boschin, A. D’Agostina, M. Negri and C. Sorlini*
Maturity Testing

Hydrogen Peroxide Effects on Composting and Its Use in Assessing the Degree of Maturity
C. Balis, V. Tassiopoulou and K. Lasaridi

Plant Performance in Relation to Oxygen Depletion, CO₂-Rate and Volatile Organic Acids in Container Media Composts of Varying Maturity
W.F. Brinton and E. Evans

Microbiological and Chemical Characterisation of Composts at Different Levels of Maturity, with Evaluation of Phytotoxicity and Enzymatic Activities
A.C. Cunha Queda, G. Vallini, M. Agnolucci, C.A. Coelho, L. Campos and R.B. de Sousa

Monitoring of a Composting Process: Thermal Stability of Raw Materials and Products
M.T. Dell’Abate and F. Titarelli

Compost Maturity – Problems Associated with Testing
M. Itävaara, O. Venelampi, M. Vikman and A. Kapanen

Use of CLPP for Evaluating the Role of Different Organic Materials in Composting
F. Pinzari, F. Tittarelli, A. Benedetti and H. Insam

Evaluation of Organic Matter Stability During the Composting Process of Agroindustrial Wastes
F. Tittarelli, A. Trinchera, F. Intrigliolo and A. Benedetti

Characterization of Organic Substances in Stabilized Composts of Rest Wastes
A. Zach

Application and Environmental Impact

Composting of Posidonia oceanica and Its Use in Agriculture
P. Castaldi and P. Melis
Practical Use of Quality Compost for Plant Health and Vitality Improvement
J.G. Fuchs

Environmental Impacts of Cattle Manure Composting
P.A. Gibbs, R.J. Parkinson, T.H. Misselbrook and S. Burchett

Agronomic Value and Environmental Impacts of Urban Composts Used in Agriculture
S. Houot, D. Clergeot, J. Michelin, C. Francou, S. Bourgeois, G. Caria and H. Ciesielski

Composting in the Framework of the EU Landfill Directive
M. Kranert, A. Behnse, A. Schultheis and D. Steinbach

Occurrence of Aspergillus fumigatus in a Compost Polluted with Heavy Metals
E. López Errasquin, B. Patiño, R.M. Fernández and C. Vázquez

Important Aspects of Biowaste Collection and Composting in Nigeria
K.T. Raheem, K.I. Hänninen and M. Odele

Plant and Human Pathogens

Use of Actinobacteria in Composting of Sheep Litter
S. Baccella, A.L. Botta, S. Manfroni, A. Trinchera, P. Imperiale, A. Benedeti, M. Del Gallo and A. Lepidi

Methods for Health Risk Assessment by Clostridium botulinum in Biocompost
H. Böhnel, B.-H. Briese and F. Gessler

The Fate of Plant Pathogens and Seeds During Backyard Composting of Vegetable, Fruit and Garden Waste
J. Ryckeboer, S. Cops and J. Coosemans

Survival of Phytopathogen Viruses During Semipilot-Scale Composting
**Air-Borne Emissions and Their Control**

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composting Conditions Preventing the Development of Odorous Compounds</td>
<td>551</td>
</tr>
<tr>
<td><em>E. Binner, D. Grassinger and M. Humer</em></td>
<td></td>
</tr>
<tr>
<td>Odour Emissions During Yard Waste Composting: Effect of Turning Frequency</td>
<td>561</td>
</tr>
<tr>
<td><em>N. Defoer and H. Van Langenhove</em></td>
<td></td>
</tr>
<tr>
<td>Emission of Microorganisms from Composting Facilities</td>
<td>571</td>
</tr>
<tr>
<td><em>P. Kämpfer, C. Jureit, A. Albrecht and A. Neef</em></td>
<td></td>
</tr>
<tr>
<td>Molecular Identification of Airborne Microorganisms from Composting Facilities</td>
<td>585</td>
</tr>
<tr>
<td><em>A. Neef and P. Kämpfer</em></td>
<td></td>
</tr>
<tr>
<td>Bioaerosols and Public Health</td>
<td>595</td>
</tr>
<tr>
<td><em>S.D. Pillai</em></td>
<td></td>
</tr>
<tr>
<td>Passively Aerated Composting of Straw-Rich Organic Pig Manure</td>
<td>607</td>
</tr>
<tr>
<td><em>A. Veeken, V. de Wilde, G. Szanto and B. Hamelers</em></td>
<td></td>
</tr>
<tr>
<td><strong>Index</strong></td>
<td>623</td>
</tr>
</tbody>
</table>
Microbiology of Composting
Insam, H.; Riddech, N.; Klammer, S. (Eds.)
2002, XII, 636 p., Hardcover
ISBN: 978-3-540-67568-6