

Preface

Meaningful Use of Biomass Ashes: Closing the Cycle

Biomass ash is the solid residue from the combustion of plant biomass which is increasingly being used for heat and electricity production. Biomass ash contains a wealth of macronutrients and micronutrients. Despite the value of the various elements contained in the ashes, their disposal in landfills is still common practice, generating considerable costs for biomass plant operators and negating the recycling potential of ashes. A prerequisite for sustainable use of ashes in agriculture and forestry, however, is their quality in terms of nutrients, on the one hand, and of heavy metals and organic pollutants, on the other. Appropriate combustion and separation techniques to obtain qualitatively valuable ash fractions are thus highly desirable.

To bring together knowledge and ideas on the reutilization of biomass ashes, the conference “Recycling of Biomass Ashes” was held in Innsbruck in March 2010, focusing on various recycling technologies for biomass ashes. This book comprises 11 chapters that are based on selected conference contributions. An introductory chapter by Insam and Knapp gives an overview of current technologies and future needs for ash recycling. In Chap. 2 (Schiemenz et al.), the virtue of ashes as a phosphorous source is emphasized. In Chaps. 3, 5 and 6, nutrient-related aspects of ashes from wood (Haraldsen et al. and Omil et al.) and olive residues (Nogales et al.) are addressed. Nieminen in Chap. 4 addresses the effect of wood ash on the soil fauna. Bougnom et al. in Chap. 7 and Sarabèr et al. in Chap. 8 discuss the potential of tropical acid soil melioration with ashes (from wood and cocoa residues, respectively). In Chaps. 9 and 10, Mödinger and Berra et al. elaborate on the potential of wood ash use in brick making and in the cement industry, respectively. Ash recycling as a puzzle stone in a sustainable society is addressed by Ribbing and Bjurström in Chap. 11.

The editors gratefully acknowledge the assistance of the many reviewers in improving the manuscripts and thank Springer-Verlag for excellent cooperation during the production of the book. The support of the Tiroler Zukunftsstiftung (K-Regio Center BioTreaT) is also acknowledged.

Innsbruck, Austria

Heribert Insam
Brigitte A. Knapp



<http://www.springer.com/978-3-642-19353-8>

Recycling of Biomass Ashes
Insam, H.; Knapp, B.A. (Eds.)
2011, VIII, 164 p., Hardcover
ISBN: 978-3-642-19353-8