

# CONTENTS

- 371 **Introduction: Impact of land use change for bioenergy production on greenhouse gas emissions**  
*Bruce Osborne and Michael B. Jones*
- 372 **Land-use change to bioenergy production in Europe: implications for the greenhouse gas balance and soil carbon**  
*Axel Don, Bruce Osborne, Astley Hastings, Ute Skiba, Mette S. Carter, Julia Drewer, Heinz Flessa, Annette Freibauer, Niina Hyvönen, Mike B. Jones, Gary J. Lanigan, Ülo Mander, Andrea Monti, Sylvestre Njakou Djomo, John Valentine, Katja Walter, Walter Zegada-Lizarazu and Terenzio Zenone*
- 392 **A comparative analysis of the carbon intensity of biofuels caused by land use changes**  
*Sylvestre Njakou Djomo and Reinhart Ceulemans*
- 408 **How do soil emissions of N<sub>2</sub>O, CH<sub>4</sub> and CO<sub>2</sub> from perennial bioenergy crops differ from arable annual crops?**  
*Julia Drewer, Jon W. Finch, Colin R. Lloyd, Elizabeth M. Baggs and Ute Skiba*
- 420 **The contribution of switchgrass in reducing GHG emissions**  
*Andrea Monti, Lorenzo Barbanti, Alessandro Zatta and Walter Zegada-Lizarazu*
- 435 **Consequences of field N<sub>2</sub>O emissions for the environmental sustainability of plant-based biofuels produced within an organic farming system**  
*Mette S. Carter, Henrik Hauggaard-Nielsen, Stefan Heiske, Morten Jensen, Sune T. Thomsen, Jens E. Schmidt, Anders Johansen and Per Ambus*
- 453 **Soil carbon sequestration during the establishment phase of *Miscanthus x giganteus*: a regional-scale study on commercial farms using <sup>13</sup>C natural abundance**  
*Jesko Zimmermann, Jens Dauber and Michael B. Jones*
- 462 **Reed canary grass cultivation mitigates greenhouse gas emissions from abandoned peat extraction areas**  
*Ülo Mander, Järvi Järveoja, Martin Maddison, Kaido Soosaar, Rene Aavola, Ivika Ostonen and Jüri-Ott Salm*