

CONTENTS

Review

- 181 **Energy and greenhouse gas balance of bioenergy production from poplar and willow: a review**
Sylvestre Njakou Djomo, Oualik El Kasmioui and Reinhart Ceulemans

Original Researches

- 198 **Climate warming increases soil erosion, carbon and nitrogen loss with biofuel feedstock harvest in tallgrass prairie**
Xian Xue, Yiqi Luo, Xuhui Zhou, Rebecca Sherry and Xiaohong Jia
- 208 **Water and energy footprints of bioenergy crop production on marginal lands**
A. K. Bhardwaj, T. Zenone, P. Jasrotia, G. P. Robertson, J. Chen and S. K. Hamilton
- 223 **Effects of elevated CO₂ and temperature on leaf characteristics, photosynthesis and carbon storage in aboveground biomass of a boreal bioenergy crop (*Phalaris arundinacea* L.) under varying water regimes**
Xiao Zhou, Zhen-Ming Ge, Seppo Kellomäki, Kai-Yun Wang, Heli Peltola and Pertti Martikainen
- 235 **Perennial biomass feedstocks enhance avian diversity**
Bruce A. Robertson, Patrick J. Doran, Liz R. Loomis, J. Roy Robertson and Douglas W. Schemske
- 247 **A proposed framework for determining the environmental impact of replacing agricultural grassland with *Miscanthus* in Ireland**
Alison Donnelly, David Styles, Joanne Fitzgerald and John Finnan

Technical Advance

- 264 **Enhanced lipid production in *Nannochloropsis* sp. using fluorescence-activated cell sorting**
Thi-Thai Yen Doan and Jeffrey Philip Obbard

Opinion

- 271 **The ethics of biofuels**
Joyce Tait