Record Nr. UNINA9910810432103321 Autore Chen Guangnan Titolo Sustainable Energy Solutions in Agriculture **CRC Press** Pubbl/distr/stampa **ISBN** 0-429-22749-3 1-315-77871-8 1 online resource (481 pages): illustrations Descrizione fisica Sustainable Energy Developments, , 2164-0645; ; Volume 8 Collana Altri autori (Persone) BundschuhJochen Disciplina 338.1 Soggetti Agriculture - Energy consumption Agriculture - Energy conservation Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references at the end of each chapters. Nota di contenuto Front Cover; About the book series; Editorial board; Table of contents; List of contributors; Foreword by Bill Stout; Editors' Foreword; About the editors; Acknowledgements; Section 1: Introduction; 1. Towards a sustainable energy technologies based agriculture; Section 2: Energy efficiency and management; 2. Global energy resources, supply and demand, energy security and on-farm energy efficiency; 3. Energy in crop production systems; 4. The fossil energy use and CO2 emissions budget for Canadian agriculture; 5. Energy efficiency technologies for sustainable agriculture and food processing 6. Energy-smart food - technologies, practices and policies 7. Energy, water and food; exploring links in irrigated cropping systems; 8. Energy use and sustainability of intensive livestock production; 9. Diesel engine as prime power for agriculture: emissions reduction for sustainable mechanization; Section 3: Biofuels; 10. Biofuels from microalgae; 11. Biodiesel emissions and performance; 12. Biogas; 13. Thermal gasification of waste biomass from agriculture production for energy purposes: 14. An innovative perspective: Transition towards a bio-based economy; Section 4: Access to energy 5. Increasing energy access in rural areas of developing countries Book series page Sommario/riassunto Sustainability in agriculture and associated primary industries, which are both energy-intensive, is crucial for the development of any

country. Increasing scarcity and resulting high fossil fuel prices

combined with the need to significantly reduce greenhouse gas emissions, make the improvement of energy efficient farming and increased use of renewable energy essential. This book provides a technological and scientific endeavor to assist society and farming communities in different regions and scales to improve their productivity and sustainability.