Record Nr. UNISA996320818703316 Toward sustainable agricultural systems in the 21st century [[electronic **Titolo** resource] /] / Committee on Twenty-First Century Systems Agriculture. Board on Agriculture and Natural Resources, Division on Earth and Life Sciences Pubbl/distr/stampa Washington, D.C., : National Academies Press, c2010 **ISBN** 0-309-15749-8 1-282-78731-4 9786612787317 0-309-14897-9 Edizione [1st ed.] Descrizione fisica 1 online resource (599 p.) Disciplina 630.973 Soggetti Sustainable agriculture - United States Agricultural systems - United States Sustainability - United States 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. FrontMatter -- Preface -- Acknowledgments -- Contents -- Executive Nota di contenuto Summary -- Summary -- 1 Understanding Agricultural Sustainability --2 A Pivotal Time in Agriculture -- 3 Improving Productivity and Environmental Sustainability in U.S. Farming Systems -- 4 Economic and Social Dimensions of the Sustainability of Farming Practices and Approaches -- 5 Examples of Farming System Types for Improving Sustainability -- 6 Drivers and Constraints Affecting the Transition to Sustainable Farming Practices -- 7 Illustrative Case Studies -- 8 Sustainable Agriculture in Sub-Saharan Africa: "Lessons Learned" from the United States -- 9 Conclusions and Recommendations --Appendixes -- Appendix A: Statement of Task -- Appendix B: Biographical Sketches -- Appendix C: Presentations to the Committee

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"In the last 20 years, there has been a remarkable emergence of innovations and technological advances that are generating promising changes and opportunities for sustainable agriculture, yet at the same time the agricultural sector worldwide faces numerous daunting challenges. Not only is the agricultural sector expected to produce adequate food, fiber, and feed, and contribute to biofuels to meet the needs of a rising global population, it is expected to do so under increasingly scarce natural resources and climate change. Growing awareness of the unintended impacts associated with some agricultural production practices has led to heightened societal expectations for improved environmental, community, labor, and animal welfare standards in agriculture. Toward Sustainable Agricultural Systems in the 21st Century assesses the scientific evidence for the strengths and weaknesses of different production, marketing, and policy approaches for improving and reducing the costs and unintended consequences of agricultural production. It discusses the principles underlying farming systems and practices that could improve the sustainability. It also explores how those lessons learned could be applied to agriculture in different regional and international settings, with an emphasis on sub-Saharan Africa. By focusing on a systems approach to improving the sustainability of U.S. agriculture, this book can have a profound impact on the development and implementation of sustainable farming systems. Toward Sustainable Agricultural Systems in the 21st Century serves as a valuable resource for policy makers, farmers, experts in food production and agribusiness, and federal regulatory agencies."--Publisher's description.