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Sommario/riassunto	Agriculture, as a production-oriented sector, entails energy as a substantial input by which global food security is ensured. Agricultural systems require energy for farm machinery and equipment; lighting; heating, ventilation, and air-conditioning (HVAC); food processing and preservation; fertilizer and chemical production; and water/wastewater treatment/application. Increasing agriculture mechanization mitigates conventional energy reserves that escalate greenhouse gas emissions and climate change. This book aims to offer energy-efficient and/or environment-friendly ways for the agriculture sector to achieve the 2030 UN Sustainable Development Goals. The book provides cutting-edge research on next-generation agricultural technologies and applications to develop a sustainable solution for modern greenhouses, temperature/humidity control in agriculture, farm storage and drying, crop water requirements, agricultural built environment, and wastewater treatment.