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Nota di contenuto	Testing Approaches and Components in Physiologically Based Crop Models for Sensitivity to Climatic Factors -- Wheat Responses to a Wide Range of Temperatures: The Hot Serial Cereal Experiment -- Rice Free-Air Carbon Dioxide Enrichment Studies to Improve Assessment of Climate Change Effects on Rice Agriculture -- Climate Change and Potato: Responses to Carbon Dioxide, Temperature, and Drought -- Farm Simulation Can Help Dairy Production Systems Adapt to Climate Change -- Sentinel Site Data for Crop Model Improvement: Definition and Characterization -- Evapotranspiration: Evolution of Methods to Increase Spatial and Temporal Resolution -- Variable Atmospheric, Canopy, and Soil Effects on Energy and Carbon Fluxes over Crops.
Sommario/riassunto	Understanding how crops will respond to climate change is essential to agriculture's ability to adapt and have the greatest probability of continuing to meet societal needs. Crop model intercomparison and improvement are required to advance understanding of the impact of future climate change on crop growth and yield. Initial efforts undertaken in the Agriculture Model Intercomparison and Improvement Project (AgMIP) led to several observations where crop models were not adequately simulating growth and development. Enhanced efforts are required to quantify the carbon dioxide temperature water interactions in plant growth and yield. This volume in the Advances in Agricultural Systems Modeling series presents progress in that area, with experimental observations across crops, simulation modeling

outcomes, and future challenges in improving crop simulation models.
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