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| Nota di contenuto | Introduction -- Potential limits of six major food crops' yields worldwide -- Product's supply and demand of six major food crops in major producer-countries and the world -- Discussion and conclusions, policy implications and advice on Chinese and global food security, and future prospect. |
| Sommario/riassunto | This book analyzes potential yields of six major food crops - rice, wheat, maize, potato, soybean and rapeseed worldwide using both qualitative and quantitative approaches to study both China's and global food security under climate change. Firstly, it reviews previous studies on potential yields of rice, wheat, maize, potato, soybean and rapeseed worldwide to provide a detailed information of studying on China's and global food security based on the product's supply and demand of these crops. Secondly, average and top (national) yields of rice, wheat, maize, potato, soybean and rapeseed since 1961 on global scale are employed to analyze their temporal and spatial variation trends and potential limits. Thirdly, the effects of global warming in climate change on both average and top yields of rice, wheat, maize, |

potato, soybean and rapeseed since 1961 at global level are analyzed using regression model, and their differences between average and top yields among these crops are identified and compared. Fourthly, the yields and per capita quantity of rice, wheat, maize, potato, soybean and rapeseed in major producer-countries and the world are analyzed to assess the situation and trend of international trade for the products of these crops, respectively. Fifthly, potential yields of rice, wheat, maize, potato, soybean and rapeseed worldwide by 2030 are projected using both trend-regressed models and ARIMA models to estimate the per capita quantity of these crops based on the projection of world population and assess the status of Chinese and global food security in that future. Finally, it provides policy implications and advice on food security for China and the world directing food production by 2030 under climate change.
