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Climate-Resilient Agriculture A Molecular Perspective, Edited By Ashutosh

Singh, Saurabh PandeyCopyright 2025, ISBN 9781003455271, 564 Pages 19 Color & 5 B/W Illustrations, Published July 5, 2024 by Apple Academic Press, \$219.00

DESCRIPTION

Developing climate-smart crops is vital to securing food security around the world. This new book discusses the state-ofthe-art technologies that can help to mitigate plant abiotic stresses in cultivated crops. It covers the current aspects of climate-resilience agriculture, including the crucial physiological, biochemical, and molecular aspects of cultivated crops under stress conditions, which play a pivotal role in developing climate-smart crops. The volume explores breeding, omics, genetic engineering, bioengineering of metabolic pathways, artificial intelligence, and more.

Key features:

- Addresses the current and future challenges of climate changes on food security
- Details the impact of different biotic, abiotic stresses, along with their interactions and effect on crop plants in climate-changing scenarios
- Gives a comprehensive account of molecular mechanisms associated with different stresses in crop plants
- Discusses advances in breeding and biotechnological techniques to tackle the different stresses in challenging climatic fluctuations
- Highlights various emerging approaches and technologies currently being used in developing climate-smart crops
- Provides success stories of crop improvement against the different stresses.