Explore and advance bioinformatics and systems biology tools for crop breeding programs in this practical resource for researchers

Plant biology and crop breeding have produced an immense amount of data in recent years, from genomics to interactome and beyond. Bioinformatics tools, which aim at analyzing the vast quantities of data produced by biological research and processes, have developed at a rapid pace to meet the challenges of this vast data trove. The resulting field of bioinformatics and systems biology is producing increasingly rich and transformative research.

Bioinformatics for Plant Research and Crop Breeding offers an overview of this field, its recent advances, and its wider applications. Drawing on a range of analytical and data-science tools, its foundation on an in-silico platform acquired multi-omics makes it indispensable for scientists and researchers alike. It promises to become ever more relevant as new techniques for generating and organizing data continue to transform the field.

Bioinformatics for Plant Research and Crop Breeding readers will also find:

- A focus on emerging trends in plant science, sustainable agriculture, and global food security
- Detailed discussion of topics including plant diversity, plant stresses, nanotechnology in agriculture, and many others
- Applications incorporating artificial intelligence, machine learning, deep learning and more

Bioinformatics for Plant Research and Crop Breeding is ideal for researchers and scientists interested in the potential of OMICs, and bioinformatic tools to aid and develop crop improvement programs.

Jen-Tsung Chen, PhD, is currently a professor at the National University of Kaohsiung in Taiwan. His research interests include bioactive compounds, chromatography techniques, in vitro culture, medicinal plants, phytochemicals, plant physiology, and plant biotechnology.

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