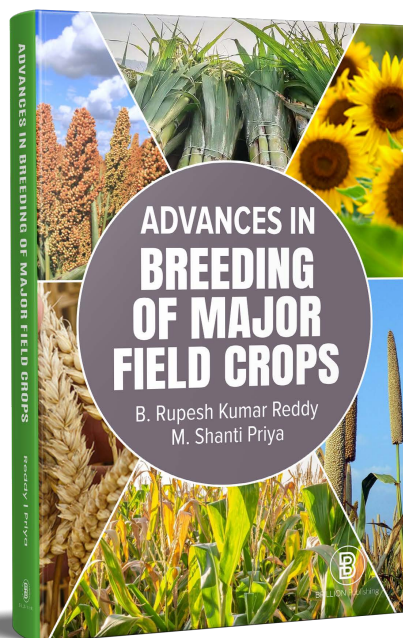




BRILLION Publishing

# ADVANCES IN BREEDING OF MAJOR FIELD CROPS



*Advances in Breeding of Major Field Crops* is a text book written to provide insights into advancements in the improvement of major field crops. The book delineates the evolution of crop improvement from its inception to the present with the integration of conventional breeding techniques and other innovative approaches. It covers various breeding procedures, incorporating new, advanced technologies focusing on developing high-yielding cultivars with biotic and abiotic stress resistance. It serves as a comprehensive guide for the graduate, post graduate students, teachers and research scientists.

The book covers the latest breakthroughs in plant breeding techniques for major field crops. Advances in field crop breeding have evolved from simple selection methods to genomics-driven precision breeding. These innovations have significantly improved yield, stress tolerance, nutritional quality, and sustainability. The book includes expanded coverage of molecular biology and genetic advancements. Efforts have been made to describe the methods of plant breeding in a systematic and comprehensive manner.

It includes a total of 38 chapters covering history, description, classification, origin and phylogenetic relationship, genome status in cultivated and alien species, breeding objectives and breeding methods, national and international accomplishments in genetic improvement of various field crops. The subject matter is illustrated with figures and tables, wherever, felt necessary.

The book seeks to bridge the gap between classical breeding approaches and modern biotechnological advancements, promoting the development of high-yielding, climate-resilient, and nutritionally enhanced crop varieties. This book brings together information on the new tools and techniques of molecular genetics in crop improvement. This book also provides an array of national and international events and accomplishments in different field crops like paddy, wheat, maize, bajra, sorghum, redgram, blackgram, greengram, cowpea, groundnut, castor, sunflower, cotton and sugarcane. The book is designed in such a way that the readers will be benefitted immensely with the knowledge of different aspects of plant breeding in various important field crops.

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