

BOOK REVIEW

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Alien Introgression in Wheat Cytogenetics, Molecular Biology, and Genomics

This book provides an overview of the latest achievements in the field of alien introgression in wheat.

The thirteen chapters were written by internationally recognized experts from Europe, North America, Australia and Asia. The book, published by Springer International Publishing AG Switzerland at the end of 2015, covers the latest advances in the field of interspecific and intergeneric hybridization with wheat.

The first chapter discusses the taxonomy of the Triticeae species related to wheat, while the second gives a detailed description of the evolution of wheat. There is an introduction to the problems of wheat breeding in the third chapter. The next three chapters deal with crossability, gametocidal genes and the regulation of homologous chromosome pairing after which six chapters discuss the results achieved in the interspecific and intergeneric hybridization of wheat with various related species (*Secale*, *Triticum*, *Aegilops*, perennial *Triticeae*, *Hordeum*). The last chapter outlines new results on the genomics of wild wheat relatives and introgressions.

It is expected that this book will stimulate more intensive work on the genetic diversity of wild wheat relatives, their genome structure and their exploitation in wheat breeding. Wild wheat relatives and related cultivated species represent a treasure trove of genes and alleles for wheat breeding. The methods developed and the knowledge gained in the past, together with new molecular genetic and genomic techniques should make the exploitation of wheat relatives more efficient and the breeding of improved wheat cultivars with novel traits a realistic goal.

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