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Chromosome engineering is one from recent sphere of biology applicable in crop improvement. Volume 2 of the book series Genetic Resources, Chromosome Engineering and Crop Improvement evaluates its possibilities in cereals. The editors and authors are prominent authorities in particular fields included in this book.

The book is divided into 13 chapters. Each chapter provides a comprehensive account of the crop from its origin through breeding and cytogenetic manipulation to molecular genetics and biotechnology. The wheat, rice, maize, oat, barley, pearl millet, sorghum, rye and *Triticale* are described.

The Chapter 1 deals with cytogenetic architecture of cereal crops and principles and strategies of cytogenetic and breeding manipulations. Chapters 2 to 4 are aimed at wheat. Chapter 2 describes chromosome engineering of durum wheat genome, Chapter 3 treats of utilization of genetic resources for bread wheat improvement and Chapter 4 is aimed at molecular markers, genomics and genetic engineering in wheat. Chapter 5 evaluates cytogenetic manipulations and germplasm enhancement of rice. Chapter 6 describes genetic enhancement of

maize by cytogenetic manipulation and breeding for yield, stress tolerance and high protein quality. Chapter 7 describes cytogenetic manipulation in oat improvement. Chapters 8 and 9 are aimed at barley. Utilization of genetic resources for barley improvement and chromosome mapping are described. Primary to tertiary gene pool of barley, haploid, tetraploid and mutation breeding and role of somaclonal variation are discussed. Chapter 10 treats of genetic improvement of pearl millet with respect to cytogenetic manipulation and heterosis breeding. Chapter 11 is aimed at cytogenetic improvement and genetic resources in sorghum. The rye (*Secale cereale*) is described in Chapter 12 and *Triticale* in Chapter 13.

The ploidy levels and germplasm enhancement through interspecific hybridization were especially studied. In the most chapters the *in vitro* techniques, chromosome manipulations, transformation, direct transfer of genes, and other molecular genetic methods are described. The text is adequately supplemented by tables and figures. The chapters include a comprehensive list of references down-to-date 2005. Excellent subject index saves labour with this excellent scientific book.

J. VAGER (Olomouc)