

Cytogenetics

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Cytogenetics, starting with description of structure and function of eukaryotic and prokaryotic cells discusses mitosis, meiosis, cell cycle and chromosome behavior during cell division. Chromosome morphology, its organization and chromosome banding techniques are discussed in detail. Mendel's laws of heredity and the phenomena leading to deviation from Mendelian segregation, genetic recombination, its mechanisms and construction of genetic map are described along with a detailed discussion on variations in chromosome number (euploidy-auto- and allopolyploidy, aneuploidy, haploidy) and structural variations in chromosomes (duplication, deletion/deficiency, inversion and reciprocal translocation). Cytogenetic structures of a few crops are also given and methods provided for genomic and subgenomic manipulation for practical purposes. Also discussed in this book are the production of $2n$ gametes, its application and endosperm genetics and various cytological techniques which will help in conducting practical classes in cytogenetics.

KEY FEATURE:

- * Includes a set of questions in cytogenetics and genetics to help students understand the subject better



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ISBN 978-1-84265-487-3

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