

Special Issue

Production of Dihaploids of Crop Plants through Androgenesis, Gynogenesis, Wide Crossing and Other Techniques

Message from the Guest Editors

Haploids are plants with a gametic number of chromosomes (n). After doubling the chromosome number, spontaneously or with the use of antimetabolic agents, double haploids are obtained. The production of doubled haploids significantly shortens the process of obtaining homozygous lines and can replace the long-lasting inbreeding. There are several methods of haploidisation. One of them is androgenesis, which covers regeneration of the haploid plant from immature pollen grains. Another method is gynogenesis, which involves the regeneration of the plant from the haploid cells of the female gametophyte. Haploids can be also obtained through the elimination of chromosomes after the wide crossing of individuals of two species or two genera. The latest technique for obtaining haploids is based on the targeted manipulation of centromere-specific histone protein (CENH3), inactivating the CENH3. This Special Issue will focus on recent advances in the production of haploids and dihaploids using the abovementioned techniques, including the different methods of homozygosity verification in regenerants. Research articles, review articles, as well as short communications are welcome.

Guest Editors

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