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 antimitotic 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

Dr. Małgorzata Podwyszyńska

Department of Applied Biology, The National Institute of Horticultural Research, Konstytucji 3 Maja 1/3 Street, 96-100 Skierniewice, Poland

Dr. Agnieszka Kiełkowska

Department of Plant Biology and Biotechnology, Faculty of Biotechnology and Horticulture, University of Agriculture in Krakow, Al. 29-Listopada 54, 31-425 Krakow, Poland

Deadline for manuscript submissions

closed (31 March 2024)

Agronomy

an Open Access Journal by MDPI

Impact Factor 3.4
CiteScore 6.7

mdpi.com/si/132784

Agronomy
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
agronomy@mdpi.com

mdpi.com/journal/agronomy

Agronomy

an Open Access Journal by MDPI

Impact Factor 3.4
CiteScore 6.7

mdpi.com/journal/agronomy

MDPI

About the Journal

Message from the Editor-in-Chief

Agronomy draws together researchers from diverse areas of agricultural research with a common aim of enhancing agricultural productivity globally. The journal provides unlimited free access to all those interested in advancing agricultural science from both the research and general community. Papers are released immediately after acceptance through the internet. *Agronomy* is supported by our authors and their institutes through low article processing charges (APC) for accepted papers. We hope you will support the journal by becoming one of our authors.

Editor-in-Chief

Prof. Dr. Leslie A. Weston
Gulbali Centre for Agriculture, Water and Environment Research, Charles Sturt University, Wagga Wagga, NSW 2678, Australia

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubAg, AGRIS, and other databases.

Journal Rank:

JCR - Q1 (Agronomy) / CiteScore - Q1 (Agronomy and Crop Science)