



Genetic Relationships and Artificial Hybridization within the Forest Trees

Guest Editors:

Dr. Andrej Kormuťák

SKInstitute of Plant Genetics and
Biotechnology PSBC SAS Nitra,
Slovak Academy of Sciences,
Bratislava, Slovakia

Prof. Dr. Gary R. Hodge

Department of Forestry &
Environmental Resources,
College of Natural Resources,
North Carolina State University,
Raleigh, NC 27695, USA

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Message from the Guest Editors

The artificial hybridization of plants serves as a useful tool in estimating the genetic relationships between species. The interspecific hybrids are thought to harbour greater variation than corresponding parental species, which endows them with a higher adaptability towards unusual habitats. Advanced generation hybrids are likely to have even a greater range of genetic variation due to segregation after the first generation. Genetic variation in genome size of the hybrids and in their parental species is believed to be positively related to the phylogenetic distance between the parental species. Therefore, further estimates of these parameters are necessary to help the breeders in making better long-term decisions. Practical importance is also the value of hybrids in increasing wood production and in improving wood quality. The interspecific hybrid trees planted throughout the world on a commercial basis are most common in the genera *Acacia*, *Eucalyptus*, *Larix*, *Picea*, *Pinus* and *Populus*. A reliable validation of the hybrids together with prediction of hybrid performance and fitness are important aspects in deciding on the optimal hybrid breeding strategy.





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Forests Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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