





Special Issue Reprint

Genetics and Breeding of Edible Mushroom

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Edible mushrooms, well known for their high nutritional and medicinal value, have been widely cultivated across the globe. Studies involving germplasm resources, molecular markers, genetics, breeding systems, and cultivation techniques have been extensively performed over the last few decades, considerably promoting the mushroom industry. However, both mushroom development and the formation of nutritional and medicinal characteristics involve complicated systems comprising gene regulatory networks and environmental stimulations. In recent years, with breakthroughs in high-throughput sequencing and omics, genetic transformation, and gene editing technologies, among other domains, more and more researchers have focused on the molecular genetic mechanisms of mushroom yield and quality, making some progress. An in-depth understanding of these mechanisms has further guided and facilitated breeding. Moreover, some studies have been carried out in the field of functional gene mapping and the marker-assisted breeding of edible mushrooms with agronomic traits. This Special Issue explores both fundamental research and technological applications in the field of mushroom genetics and breeding.





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