



## Cryopreservation of Plant Germplasm I

By Y. P. S. Bajaj

Springer Sep 1995, 1995. Buch. Book Condition: Neu. 23.5x15.5x cm. Neuware - The germ plasm of numerous plant species, especially those of forest trees, some agricultural crops, and medicinal plants, is endangered and threatened with extinction. This depletion of germplasm pools and the shrinkage of naturally occurring genetic resources have caused international concern. Conventionally, the germplasm of plants is conserved through seeds, tubers, roots, corms, rhizomes, bulbs, cuttings, etc. However, the germ plasm of a number of trees and plantation crops (such as coconut, cacao, coffee, oil palm, rubber, mango, horse chestnut, etc.) cannot be preserved since their seed are short-lived (recalcitrant). Likewise, germplasm of vegetatively propagated crops (such as potato and cassava) cannot be stored on a long term basis and has to be grown and multiplied periodically in nurseries and fields. The plants are thus exposed to unpredictable weather conditions and diseases, with the result that instances are known where entire genetic stocks are lost. Therefore, unconventional methods are being developed for the storage and international exchange of germplasm. For this purpose in vitro cultures have been employed, but they can only enable short-to medium term preservation; moreover, cell cultures upon repeated subculture undergo genetic erosion. In...



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