

CRYOPRESERVATION OF AVOCADO

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Avocado genetic resources are maintained *ex situ* in field repositories at great cost and always under threat of inclement weather, pests and disease. Cryopreservation is an important alternative method for long-term conservation of plant genetic resources. Moreover, it is an important storage method for biotechnology research, in which experimental materials, *i.e.*, embryogenic cultures, lose morphogenic competence relatively quickly and cannot be stored reliably *in vitro*. Two cryopreservation procedures have been developed for avocado embryogenic cultures: 1) slow cooling at $-1^{\circ}\text{C min}^{-1}$ from 25°C to -80°C followed by rapid cooling to -196°C ; and 2) vitrification or rapid cooling from 25°C to -196°C . Embryogenic cultures recovered from cryogenic storage demonstrate normal growth, and somatic embryos can be recovered. All of the avocado genotypes currently being genetically manipulated in our research program have been successfully introduced into liquid nitrogen. Cryogenic storage of avocado has important significance for management of avocado genetic resources.