

## Abstract

Zygotic embryos, cotyledonary node, shoot tip and nodal explant of local cultivar were cultured on hormone-free MS medium supplemented with 3% sucrose and mannitol or sorbitol or dimethylsulfoxide at various concentrations in order to conservation. The cultures were maintained under 2,000 lux illumination, 14 hour photoperiod at  $10 \pm 2^\circ\text{C}$ . By this method, it was found that zygotic embryos could be stored for 6 weeks. Among cryoprotectants tested, mannitol gave the highest percent germination after storage, significant difference to that obtained from the other two cryoprotectants. Percent germination of the embryos after storage on mannitol, sorbitol and dimethylsulfoxide was 72.96, 57.00 and 40.30, respectively.

Storage of cotyledonary node of local cultivar on the same medium with 0.05 M mannitol also provided the highest recovery a new shoot after storage for 5 weeks with 95.00 %. Shoot tips and nodal segment could be stored under these conditions for 20 weeks. Shoot tip of local cultivar gave the highest percent recovery a new shoot with 91.50%, followed by GT1 and PB5/51 which gave percent recovery with 83.43% and 80.78%, respectively. Similar results were obtained from storage nodal segment, but percent recovery a new shoot was inferior. Local cultivar also provided the highest percent recovery a new shoot with 59.87%, followed by GT1 and PB5/51 which gave equally percent survival with 55.75%.