

**B-03: Screening of sesame (*Sesamum indicum*) accessions for super low temperature sensitivity**

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Cryo-preservation is one of the accepted methods to prolong seed viability and this method is being used for longterm conservation of germplasm. It is done using liquid nitrogen (LN2). Each seed accession preserved in LN2 has to be tested for sensitivity to cryogenic temperature. This is for identification of super low temperature tolerance and susceptible accessions. The objective of the present study was to explore the adaptability of sesame germplasm to cryogenic temperature.

Eight different sesame accessions were used for the study. After determination of initial seed moisture content, checking seed viability and colour, each seed sample was covered with a piece of aluminum foil and directly immersed in LN2 for 2 h. Samples were taken out from the cryogenic storage and re-warmed under ambient laboratory conditions. After reaching the room temperature, each seed sample was tested for germination.

Seed coat of sesame was white, light brown or black. Initial seed moisture content was between 4.7-5.3% and initial seed germination was 90-100% for all accessions. Accessions having black seed coat did not show a significant reduction of seed germination after storage in LN2. In contrast those with white or light brown seed coats had a poor germinability.

These results suggest that sesame accessions with black seed coat are tolerant to super low temperature and hence can be successfully preserved in LN2.