CONCLUSION

- Seed germination was increased significantly by different types of treatments suggesting effective breaking of physical and physiological dormancy. The described method will ultimately help in the widespread cultivation of this wonder plant at the farmers' field of Ladakh.

- High genetic variation was observed in the genotypes of *Capparis*, which implied the need to conserve sufficiently large populations in natural habitats for conservation of its genetic diversity and avoidance of genetic erosion.

- The leaves extract of *Capparis* plant contain significant amount of polyphenols and antioxidant activity. The variation in polyphenols and antioxidant activity among different populations is not significantly related with genetic variations measured based on RAPD, ISSR and in combination of RAPD and ISSR markers.

- All the edible parts including leaves of *C. spinosa* also contain significant amount of polyphenolic compounds and possess a strong antioxidant/free radical scavenging activity. The leaves and caper buds contain high amount of polyphenols and antioxidant activity.

- Flower buds of *C. spinosa* grow in Ladakh region having more nutritional contents than the other parts of the world. Therefore it can be used as nutritional supplements.