

**Title** Total soluble sugars in tulip bulbs and freesia corms during storage  
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#### **Abstract**

In general, bulbs and corms of ornamental plants are highly recommended to store in ambient temperature for certain period depends on the production strategies. During the storage period, many physiological changes occur in bulbs and corms. In this study, total soluble sugars of tulip bulbs (*Tulipa gesneriana* L. cvs. Negrita and Cassini) and freesia corms (*Freesia reflecta* Klatt. cvs. Polaris and Alaaddin) were investigated during different storage conditions. The bulbs and corms were stored in either non-cold (18-25°C and 55-65% RH) or cold (5±1 °C and 70-85 %RH) storage condition. Total soluble sugars and loss of weight in bulbs and corms stored in both conditions were evaluated for 120 days with 40 days intervals. Loss of weight in bulbs and corms were increased linearly in both storage conditions. In general, total soluble sugar contents were higher in tulip than that in freesia. In addition, significant varietal differences were detected between the cultivars. In tulip cultivars, total soluble sugar contents were higher in cold-stored bulbs than that in non-cold stored ones, whereas no significant difference between storage conditions was detected in corms of freesia cultivars. The results indicated significant differences between species as well as cultivars in response to storage conditions.