

## Effects of Low Temperature Treatment, Freezing Point Storage and Day Length on the Flowering of *Allium* 'Sapporo No. 1' and 'Sapporo No. 2'

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### Summary

We investigated the effects of low temperature treatment, freezing point storage and day length on the flowering of two new allium varieties: 'Sapporo No. 1' ('Blue Perfume') and 'Sapporo No. 2' ('Sky Perfume'), which are interspecific hybrids between *Allium caesium* and *A. caeruleum*. Cut flowers with good quality were obtained when 'Sapporo No. 1' bulbs were stored at 5 °C for 10-12 weeks and when 'Sapporo No. 2' bulbs were stored at 5 °C for 8 weeks before planting in a greenhouse. Early flowers were obtained when the bulbs were lifted after flower cutting and chilled at 5 °C for 10-12 weeks beginning in June or July.

By using this chilling treatment and planting dates from August to October, flowers were obtained from October to January. Bulbs of 'Sapporo No. 1' were stored at -2 °C from October and then planted monthly from January to September in a greenhouse at a minimum temperature of 10 °C. Flowering was observed in all treatments, but as storage period was long, the percentages of flowering and flower stem lengths decreased. A long photoperiod treatment (16 hours) advanced the flowering time and increased flower stem elongation.