



[Available Issues](#) | [Japanese](#)

Author: [ADVANCED](#) | Volume Page

Keyword:



[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

Horticultural Research (Japan)

Vol. 9 (2010) , No. 3 325-332

Effects of Winter Night Temperature on the Flowering Quality of Cut Flowers in Spray-type Carnation (*Dianthus L.*) Cultivars

[Fujio Baba](#)¹⁾, [Chikako Ishii](#)¹⁾, [Kanako Ishii](#)¹⁾, [Hiroshi Muto](#)¹⁾ and [Z](#)

1) Izu Agricultural Research Center, Shizuoka Prefectural Research and Forestry

(Received May 28, 2009)

(Accepted November 20, 2009)

Effects of winter night temperature (5, 10, 15 or 20°C) on the flowering quality of spray-type carnation (*Dianthus caryophyllus* L.) 'Light Pink Barb Tessino' were investigated. In both cultivars, secondary lateral shoots (second decapitation (second pinch lateral shoots)) grew more rapidly at the highest temperature, whereas the length of second pinch lateral shoots at the lowest night temperature (5°C). In both cultivars, the number of

flowering decreased, and the yield of cut flowers increased with increasing temperature. The lowest (5°C) night temperature adversely affected the yield and quality of cut flowers. In 'Cherry Tessino', the red color pigment and marginal variegation of flowers increased up to completely red petals with increasing temperature. The chromatic component L* value showed a tendency to increase with increasing night temperature, and a* value showed a tendency to decrease. In conclusion, from the perspective of achieving a good balance between yield and quality of cut flowers, suitable night temperatures in winter for cut flower production of spray-type carnation 'Light Pink Barbara' and 'Cherry Tessino' are 15°C.

Key Words: [days to flowering](#), [flower color](#), [lateral shoot](#)

[\[PDF \(854K\)\]](#) [\[References\]](#)

Download

To cite this article:

Fujio Baba, Chikako Ishii, Kanako Ishii, Hiroshi Muto and Zentarō Baba. Winter Night Temperature on the Flowering, Yield and Quality of Cut Flower of Carnation (*Dianthus caryophyllus* L.) Cultivars. Hort. Res. (Japan)

doi:10.2503/hri.9.325