

Low Temperatures Best for Bedding Plants

Bedding plant growers strive to produce high quality plants in as little time as possible. Increasing the temperature in the greenhouse will accelerate crop growth but the resulting effects on crop quality can be variable. Vaid (et al., 2014) looked at the impact of holding greenhouses at a constant temperature of 14, 17, 20, 23 and 26°C on the rate of crop development and crop quality of a number of commonly grown bedding plant crops (marigold, cup flower, impatiens, diascia, geranium, globe amaranth, heliotrope, nemesia, osteospermum, snapdragon, torenia and stock). Increasing the greenhouse temperature resulted in faster growth in all of the crops tested. In 5 of the 15 crops this acceleration in crop growth resulted in early flowering but in 12 of the 15 crops as the greenhouse temperature increased the number of flowers/plant decreased, resulting in a decline in overall crop quality. Similarly, in 8 of the 15 species tested, the amount of branching also decreased as temperatures rose – yielding a less attractive tall spindly plant. The conclusion of the study was that while operating greenhouses as cool as 14C low slowed growth of bedding plant crops it generally enhanced crop quality - while also reducing heating costs. The only crops which required slightly higher temperatures for optimal quality were impatiens, torenia and globe amaranth.

Source : Vaid, Runkle and Frantz (2014). HortScience 49: 574-580.