

Overcoming Summer Dormancy of Boxwood

by
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(ABSTRACT)

The objective of this work was to determine if summer dormancy of boxwood could be removed either through nutritional or hormonal means. *Buxus sempervirens* L. ‘Suffruticosa’, *B. sempervirens* ‘Vardar Valley’, and *B. sinica* var. *insularis* (Nakai) ‘Justin Brouwers’ were used for these studies. In the nutrition study, experiments were conducted to examine the effects of various levels of Osmocote 15-9-12 and liquid 10-4-6 on growth of boxwood. Optimal shoot dry weight was achieved at applications of 12 to 16 g Osmocote and 100 – 150 ppm N liquid fertilizer. Leachate EC corresponding to optimal shoot dry weight ranged from 0.5 to 0.7 dS/m for Osmocote and from 0.7 to 1.5 dS/m for liquid fertilizer. While the fertilizer requirements for boxwood optimal dry weight accumulation were determined, additional flushes of growth subsequent to the initial spring flush did not occur for ‘Vardar Valley’ and English boxwood. In the phytohormone study, experiments were conducted that examined the effects of pruning, Promalin (GA₄₊₇ and BA), and defoliation on the growth of three boxwood species. While Promalin applied alone or in conjunction with pruning shows promise of increasing new shoot growth, its response was not consistent from experiment to experiment. In fact, when it was applied in conjunction with defoliation, it dramatically decreased number of new shoots and actually resulted in some shoot mortality. Pruning was also erratic in its promotion of new shoots. Defoliation increased new shoot number dramatically and shows the most promise in overcoming summer dormancy.

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