POST HARVEST PERFORMANCE AND DISPLAY LIFE OF CUT PHLOX FLOWER HEADS: EFFECT OF PROHEXADIONE-Ca

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Prohexadione-Ca (PROHEX), an inhibitor of dioxygenases involved in late steps of GA biosynthesis and flavonoid metabolism, effectively controls and protects pome fruit trees from diseases such as fire blight and scab, and insect pests. In this report, we present our results related to the effect of PROHEX on quality and post harvest display life of cut flower heads of *Phlox paniculata* ‘John Fanick’. Addition of PROHEX in the vase solution inhibited growth of flowers and strongly prevented development of petal color by affecting anthocyanin production. In sucrose (SUC) +PROHEX, the flowers were larger than normal, but the newly opened flower buds remained light blue or bluish white. In SUC+PROHEX+GA, most of the flowers did not develop anthocyanins at all and remained a pure white color, although they attained enlarged size and exhibited enhanced longevity and extended vase life. These results indicate that the post harvest performance and display life of cut phlox flowers can be substantially modulated by regulating the level of growth regulators and SUC in the holding solution.