Title Influence of CPPU, TDZ and GA on the post harvest quality of grape (Vitis vinifera L.) cultivars ´Anab-E-Shahi´ and ´Dilkush´

Authors H.G. Patil, C. Ravindran, K.S. Jayachandran, S. Jaganath

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Abstract

Pre harvest sprays of cytokinins (CPPU and TDZ) and GA were evaluated for their effect on the post harvest quality and shelf life of two grape cultivars 'Anab-e-Shahi' and 'Dilkush' in 2002 at the University of Agricultural Sciences, Bangalore. At the beginning of anthesis, 150 bunches each of both cultivars were sprayed with three growth regulators, 50 mg L^{-1} of GA and 1, 2 and 5 mg L^{-1} of CPPU or TDZ each in combination with 50 mg L-1 of GA. Application of CPPU reduced the number of seeds per berry to a minimum in 'Anab-e-Shahi' while there was no significant difference between treated and control berries in 'Dilkush'. In cultivar 'Anab-e-Shahi' lower peel to pulp ratios was obtained with 2 mg L^{-1} TDZ+50 mg L^{-1} GA, 5 mg L^{-1} TDZ and 1 mg L^{-1} CPPU. There were no differences between control and treatments in the cultivar 'Dilkush'. Both the cultivars showed highest SSC with CPPU in comparison to the other treatments. The lowest acidity was achieved with 5 mg L^{-1} CPPU treatment in 'Anab-e-Shahi' while in 'Dilkush' the lowest acidity was in the control berries. GA treatment induced significantly higher percentage of reducing sugars followed by CPPU and least with TDZ in both the cultivars. There were wide variations in the post harvest weight loss of both the cultivars when treated with different growth regulators at different times of observation. Thus, the study revealed that both CPPU and TDZ were more effective than GA in maintaining the post harvest quality of grapes. The cultivar 'Anab-e-Shahi' was more responsive to the application of growth regulators than cultivar 'Dilkush'.