

Effect of Gibberellic Acid (GA) on yield components and fruit quality of table grape var. Himrod in Kathmandu valley, Nepal

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Abstract

Yield maximization and improved qualitative features are considered important in table grape production. The discouraging factors in table grape cultivar 'Himrod' are smaller berry size and coulure bunch resulting in lower yield. The quantitative and qualitative characteristics of grapes can be manipulated by several cultural methods which include application of plant growth regulators such as gibberellic acids, cytokinins etc. The experiment was conducted to assess the effect of different concentrations (0 ppm, 10 ppm, 20 ppm, 30 ppm, 40 ppm) of GA on berry physical and chemical characteristics of var. Himrod in Warm Temperate Research Center, Kirtipur, Kathmandu. The applications were done after the berry set when the berries attained about 4-5 mm size followed after a week by localized spraying of the grape clusters. Variable responses were obtained by different concentrations of GA. However, berry size, bunch weight, berry weight, berry volume and yield were improved significantly in treated grape clusters compared to the control. Total Soluble Solid (TSS) was found higher in the treated grapes than the control and Total Titratable Acid (TTA) was significantly reduced in the treated grapes. Higher concentration of GA (40 ppm) improved physical characteristics of grape nevertheless, lower concentration of GA (10 ppm) resulted in better chemical characteristics in var. Himrod.

Keywords: Grape, Gibberellic Acid, Berry size, Var. Himrod