

Impact of Brassinosteroid with GA3, CPPU on Yield and Quality of Newly Introduced Grape cv. Italia

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Abstract : A study was conducted to assess the influence of brassinosteroid and other bioregulators as pre-harvest sprays on yield and quality of newly introduced Californian grape cv. Italia. The vines were exposed to standardized pruning level of pruning 50% of the canes to 5-6 bud level for fruiting and 50% of the canes to two bud level for vegetative growth. The influence of brassinosteroid was assessed using BR (1 ppm) alone and in combination with GA3 and CPPU, sprayed at three different stages over the control (water spray) were given as treatments. The results revealed that the bunches treated with Brassinosteroid (1 ppm) + GA3 (10 ppm) at pea stage i.e., 7-8 mm berry size, recorded the maximum values on yield characters like bunch weight (719.94 g), yield per vine (12.70 kg/vine) and yield per hectare (15.88 t). The berry characters and quality traits were also significantly influenced by the application of bioregulators. The maximum value for all those characters was registered under bunch sprays of Brassinosteroid (1 ppm) + GA3 (10 ppm) at pea stage. The economic feasibility indicated that the treatment combination Brassinosteroid (1 ppm) + GA3 (10 ppm) at pea stage (7-8 mm berry size) had registered the maximum benefit cost ratio of 3.13, as compared to 1.89 in control (water spray). Overall, it was observed that a combined bunch spray of Brassinosteroid (1 ppm) + GA3 (10 ppm) at pea stage (7-8 mm berry size) was adjudged as the best treatment for promoting the crop for better the bunch quality and yield.

Keywords : bioregulators, brassinosteroid, CPPU, GA3, Italia grape cultivar

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