

Yield components of Grape (*Vitis vinifera L.*) cv. Siah Shiraz as affected by time of application and concentrations of paclobutrazol (PP333)

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Grapevine cv. Siah Shiraz is highly vigorous with thin clusters, this make orchard management difficult during the growing season, apart from the low yield. One of the growth retardants "PP333" of the triazol group has been given much attention recently due to the reduced vegetative growth and improved fruit quality in different species. An experiment was conducted using this cultivar to find out the optimum concentration and time of application for improving fruit quality and reduced plant growth in grapevine in vineyard site of College of Agriculture, Shiraz University. Two times of application (pre-and post-bloom) and five concentration (0, 300, 600, 900 and 1200 ppm) of "PP333" as a foliar application were imposed. The design of the experiment was a factorial with complete randomized block design in 3 replications.

Both shoot and internode length was reduced with 900 and 1200 ppm at pre bloom and only at 1200 ppm with post bloom application. The number of nodes and leaf area were not affected with time and concentrations. Chlorophyll content was increased at concentrations of 600, 900 and 1200 ppm with pre bloom and 1200 ppm at post bloom. Yield components such as cluster weight, berry weight, berries per cluster and rachis weight were examined and all of them except berry weight were increased when treated at pre bloom stages. The most effective concentration was found to be 600 ppm. Treatment after bloom produced variable results on yield components and the highest concentration resulted in lowest cluster weight. Fruit quality, such as total soluble solids (TSS), total acidity (TA), vitamin "C" and TSS/acid ratio were not affected by any of treatments.