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EFFECT OF PACLOBUTRAZOL AND TIME OF TREATMENT ON THE SOME MORPHOPHYSIOLOGICAL TRAITS IN MATTHIOLA INCANA

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In this study, we have evaluated the effect of Paclobutrazol on vegetative and chemical parameters that product potted plants whit high quality in Matthiola incana.This experiment was arranged in a factorial design based on a completely randomized design with three replications. Treatments include time treatment with three levels (30, 60, 90 days after seed sowing) and four different Paclobutrazol concentrations (0, 50,100 and 120 mgl-1). Therefore, we examined the effects of Paclobutrazol on Leaf number, stem length, stem flowering length, the number of florets, the number of stems, flowering period, fresh and dry weight of roots and shoots, RWC, electro leakage, chlorophyll content. Results showed that treatment plants with 90 days after seed sowing increased stem length, stem flowering length, the number of florets, flowering period, fresh of roots, dry weight shoots and chlorophyll a and b. Also, 60 days after seed sowing increased leaf number and dry weight of roots. In this experiment, high concentrations of Paclobutrazol effected on some characters and decrease other characters. high concentrations of Paclobutrazol increased stem length, stem flowering length, the number of florets, the number of stems, flowering period, the fresh and dry weight of roots, RWC, and low concentrations of Paclobutrazol increased chlorophyll content and fresh and dry weight of shoots. The interaction between time treatment and concentration of paclobutrazol, each treatment had effected on one or more characters.

Keywords: Paclobutrazol, Vegetative parameters, Chemical parameters, time treatment, *Matthiola incana*