

Effect of Foliar Spray with Putrescine and Salicylic Acid in Vegetative Growth, Flowering and Tuberos Roots Qualities of Ranunculus Plant (*Ranunculus asiaticus* L.) cv. 'Victoria F1'

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Abstract

The experiment was carried out in the lathhouse of the station research of horticulture and landscaping department/College of Agriculture/University of Diyala, for the season 2015-2016, to study the effect of foliar spray with putrescine at concentrations of 100 and 200 mg/l in addition to spray with distilled water as a control treatment, and salicylic acid at concentrations of 0, 100 and 150 mg/l in vegetative growth, flowering, and tuberos roots qualities of ranunculus plants (*Ranunculus asiaticus* L.) cv. 'Victoria F1', with flowers in orange color. Plants sprayed twice with the concentrations used in the experiment. The experiment was designed as a factorial experiment (3×3) in accordance with a randomized complete blocks design (RCBD) with three replicates. The results can be summarized as follows:

The results showed that foliar spray with putrescine affected positively in all vegetative growth, flowering and tuberos roots qualities. Treatment with concentration of 200 mg/l gave the best results. Foliar spray with salicylic acid affected positively in most of vegetative growth, flowering and tuberos roots qualities, the best results were obtained at concentration of 150 mg/l for all qualities except flowering date in which the treatment at concentration of 100 mg/l was surpassed. The interaction between the concentrations of putrescine and salicylic acid were effect significantly in improving the studied traits. Treatment of put200 × SA100 was surpassed in improving the characteristics of leaf area/plant, flowering date, flower diameter, length and diameter of floral stem, percentage of dry matter in flowers, number of tuberos roots/plant and, while treatment of put200 × SA150 surpassed in improving total carbohydrates in leaves, number of flowers/plant, tuberos root diameter, percentage of dry matter in roots and content of total carbohydrates in roots. Treatment of put100 × SA150 was surpassed in improving plant height, leaves number/plant, content of relative chlorophyll in leaves and percentage of dry matter in leaves. This study showed the common cooperative effect between foliar spray with spermidine and salicylic acid in improving the vegetative growth, flowering and tuberos roots qualities of ranunculus plant.

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