Effect of Pinching Date and Foliar Spray of Salicylic Acid on Growth and Flowering of Marigold (*Tagetes erecta* L.) cv. Double Eagle.

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Abstract:

An experiment was conducted to study the effect of pinching date and foliar spray of salicylic acid on growth and flowering of marigold *Tagetes erecta* L. cv. Double Eagle. The study included pinching of plants at different dates, after 10, 20 and 30 days from transplanting in addition to the control treatment (without pinching), and foliar spray of salicylic acid at four concentrations 0, 50, 100 and 150 mg/l. Plants Sprayed once after 40 days from transplanting. The results can be summarized as follows:

It found that pinching date was influential on most of vegetative growth and flowering qualities. It shows that the highest rate of plant height achieved at control treatment (without pinching), followed by pinching at 10 days after transplanting, while pinching after 30 days from transplanting gave less plant height. Pinching after 10 days from transplanting led to get a significant increase in number of leaves/plant, number of branches/plant, leaf area/plant and main stem diameter, and also led to get a significant increase in number of flowers/plant, flower dry weight and flowers content of xanthophyll, while pinching after 30 days from transplanting led to early flowering. Pinching treatments have no significant effect on vegetative dry weight, flower diameter and vase life. Foliar spray of salicylic acid led to improve most of vegetative growth and flowering qualities. Spraying with 150 mg/l surpassed in giving highest plants and increase in number of leaves/plant, number of branches/plant and vase life, while spraying with 100 mg/l led to a significant increase in leaf area/plant, number of flowers/plant, flower dry weight and flowers content of xanthophyll. Foliar spray of salicylic acid did not affect significantly on main stem diameter and vegetative dry weight. The interaction effect between pinching date and foliar spray of salicylic acid was significant in most vegetative growth and flowering qualities. Pinching after 10 days from transplanting with foliar spray of salicylic acid at 100 mg/l Surpassed in giving largest leaf area/plant and increase in main stem diameter, dry weight of vegetative growth, number of flowers/plant, flower dry weight and flowers content of xanthophyll, while pinching after 10 days from transplanting with foliar spray of salicylic acid at 150 mg/l led to a significant increase in number of leaves/plant, number of branches/plant and vase life. Pinching after 30 days from transplanting with foliar spray of salicylic acid at 100 mg/l led to early flowering.