



## Chemical constituents of *Celosia argentea* var. *cristata* L. plants as affected by foliar application of putrescine and alpha-tocopherol

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**Abstract:** The effect of putrescine at 50,100 and 200 ppm and alpha- tocopherol at 200, 400 and 600 ppm on chemical constituents of *Celosia argentea* var. *cristata* L. plants had been studied in pot experiment during two successive seasons (2009-2010) and (2010-2011). Data indicated that most criteria of chlorophylls, anthocyanin and total carbohydrates contents were significantly affected by the application of putrescine and alpha- tocopherol as compared with the control plants. Foliar application with 200 ppm putrescine resulted in the highest increase values in these studied characters as compared with the other treatments and the untreated plants in the two seasons of study. Spraying the plants with alpha- tocopherol at the concentration of 400 ppm resulted in the highest values as compared to the control plants in the two successive seasons.

**Keywords:** *Celosia cristata*, putrescine, alpha-tocopherol, chlorophylls, anthocyanin , total carbohydrate.