EFFECT OF TRYPTOPHAN AND ARGININE ON GROWTH AND FLOWERING OF SOME WINTER ANNUALS

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ABSTRACT

Tryptophan or arginine were sprayed 3 times at rates of 50, 75 or 100 ppm at age of 25, 40 and 55 days on Antirrhinum majus, L.; Delphinum grandiflorum, L.; Mathiola incana, L. and Callistephus chinensis, L. The obtained results indicate that, both tryptophan and arginine mainly at 100 ppm gave the tallest plants. Arginine at 100 ppm was more effective in advancing flowering time of D. grandiflorum by 20 and 23 days and C. chinensis by 20 and 22 days. Significant increase was recorded for number of florets, length of inflorescences stalk and portion and diameter of florets. Arginine treatment at 100 ppm gave higher seed yield per plant than tryptophan within all treated species, this increase reached to 91, 96, 84 and 201% for A. majus, D. grandiflorum, M. incana and C. chinensis, respectively compared with control plants. Both amino acids showed enhancing effect on RNA and DNA content.