S139 (P020) Morphological and phytochemical responses of Mentha piperitha L. to foliar application of biostimulants in greenhouse condition

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To investigate the effect of biostimulants foliar application on Mentha piperitha L. plants, an experiment was conducted in research greenhouse of the Academic Center for Education, Culture and Research (ACECR) in 2015-2016. The study was done on the basis of randomized complete blocks design in three replicates (RCBD). The treatments were control treatment, 400 ppm CA, 400 ppm HA, 800 ppm HA, 200 ppm CH + 400 ppm CA, 400 ppm CH + 400 ppm CA, 200 ppm CH + 400 ppm HA + 400 ppm CA, 200 ppm CH + 800 ppm HA + 400 ppm CA, 400 ppm CH + 400 ppm HA + 400 ppm CA, 400 ppm CH + 800 ppm HA + 400 ppm CA. In greenhouse the highest amount of leaves (1.630 g.plant-1), stems (1.4700 g.plant-1) and shoot (3.100 g.plant-1) dry weight was attained by 400 ppm CH + 800 ppm HA + 400 ppm CA. Essential oil content and components altered by application of biostimulants. The greatest amount of essential oil content (1.016%) was observed by 200 ppm CH + 800 ppm HA + 400 ppm CA in greenhouse. The essential oil component of Menthol showed the highest amount (45.493%) in 400 ppm CH + 400 ppm HA + 400 CA.

Key words: Biostimulants, Mentha piperitha L., Morphological and phytochemical responses