

EFFECT OF DIFFERENT ARSENIC-TREATMENTS ON THE DRY WEIGHT OF VEGETATIVE PLANT PARTS OF GREEN PEA IN THE DIFFERENT PHENOPHASE OF THE PLANT DEVELOPMENT

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Abstract. *The objective of our study was to investigate the effect of arsenate and arsenite on dry weight of root, stem and leaves of green pea in the four different growth phases (four-node condition, the beginning of flowering, green ripening, and complete maturity) of the plant development. As a results of our experiment shows, in some cases there were significant differences beetwen the effect of As(III)- and As(V)-treatmnets. Based on the data, in the case of the all phenophase, As(III)-treatments has a negatvive effect on the dry mass of vegetative plant parts. According to the results, in the case of the first phenopase the 3 mg kg⁻¹ As(V)-treatments, in the case of the further phenophase the 3 and 10 mg kg⁻¹ As(V)-treatment increased, but the higher concentration of As(V) decreased the dry mass of leaves and stem. However, the dry weigth of root was sightly increased in the first and second phenophase of the plant development as a result of the 3 mg kg⁻¹ As(V)-treatmnet, the dry mass of root was negatively effected by the As(V)-treatments.*

Keywords: arsenite, arsenate, green pea, dry weight, pot experiment

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