

Supplemental Data

Effect of potassium (K) supply on cannabinoids, terpenoids and plant function in medical cannabis

Avia Saloner and Nirit Bernstein*

Institute of Soil Water and Environmental Sciences, Volcani Center, Israel

* Corresponding author: Nirit Bernstein. E-mail address: Nirit@agri.gov.il

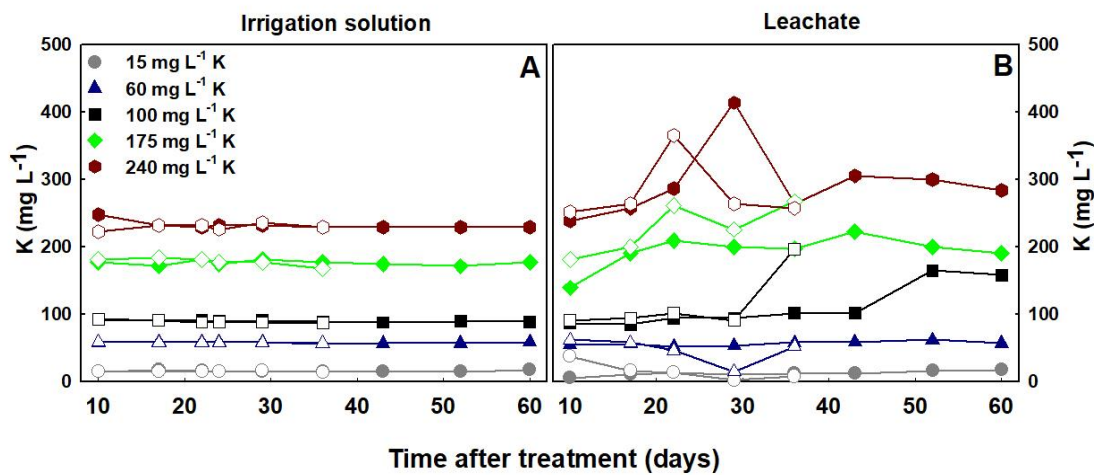


Figure S1. Concentrations of K in the irrigation solutions (A), and leachates (B), throughout the experiment duration. RM, filled symbol; DQ, empty symbol.

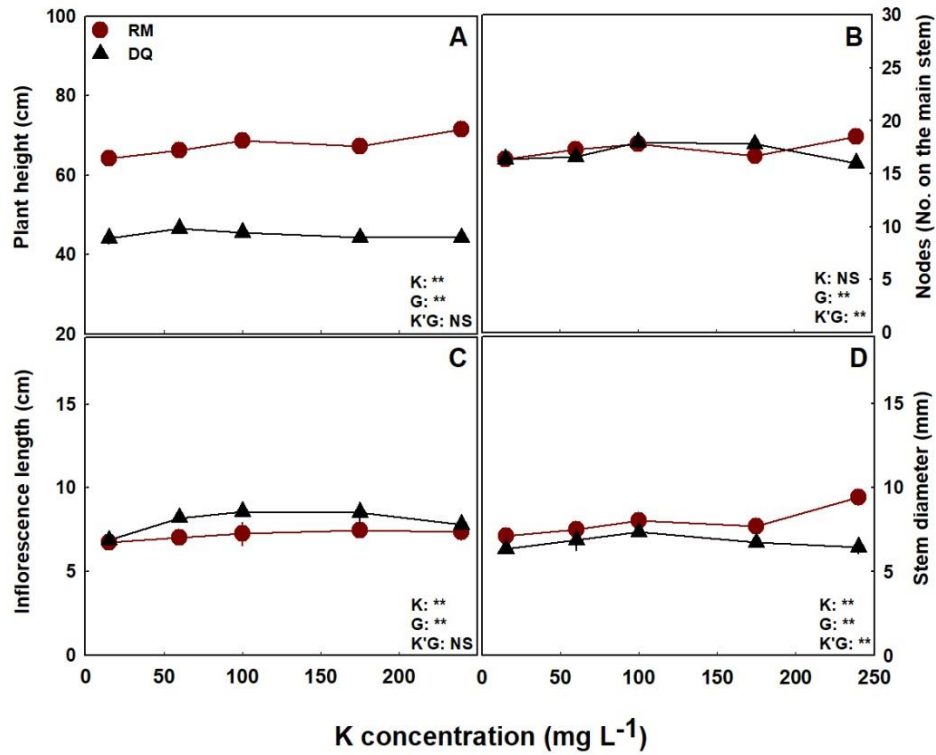


Figure S2. Effect of K concentration on the development of the medical cannabis cultivars RM and DQ. Plant height (A), number of nodes on the main stem (B), inflorescence length (C) and stem diameter (D). Where not seen, the error bars are smaller than the symbol size. Presented data are averages \pm SE (n=5). Results of two-way ANOVA are indicated as $**P < 0.05$, F -test; NS, not significant $P > 0.05$, F -test. In the ANOVA results, K'G represents the interaction between K and genotype.

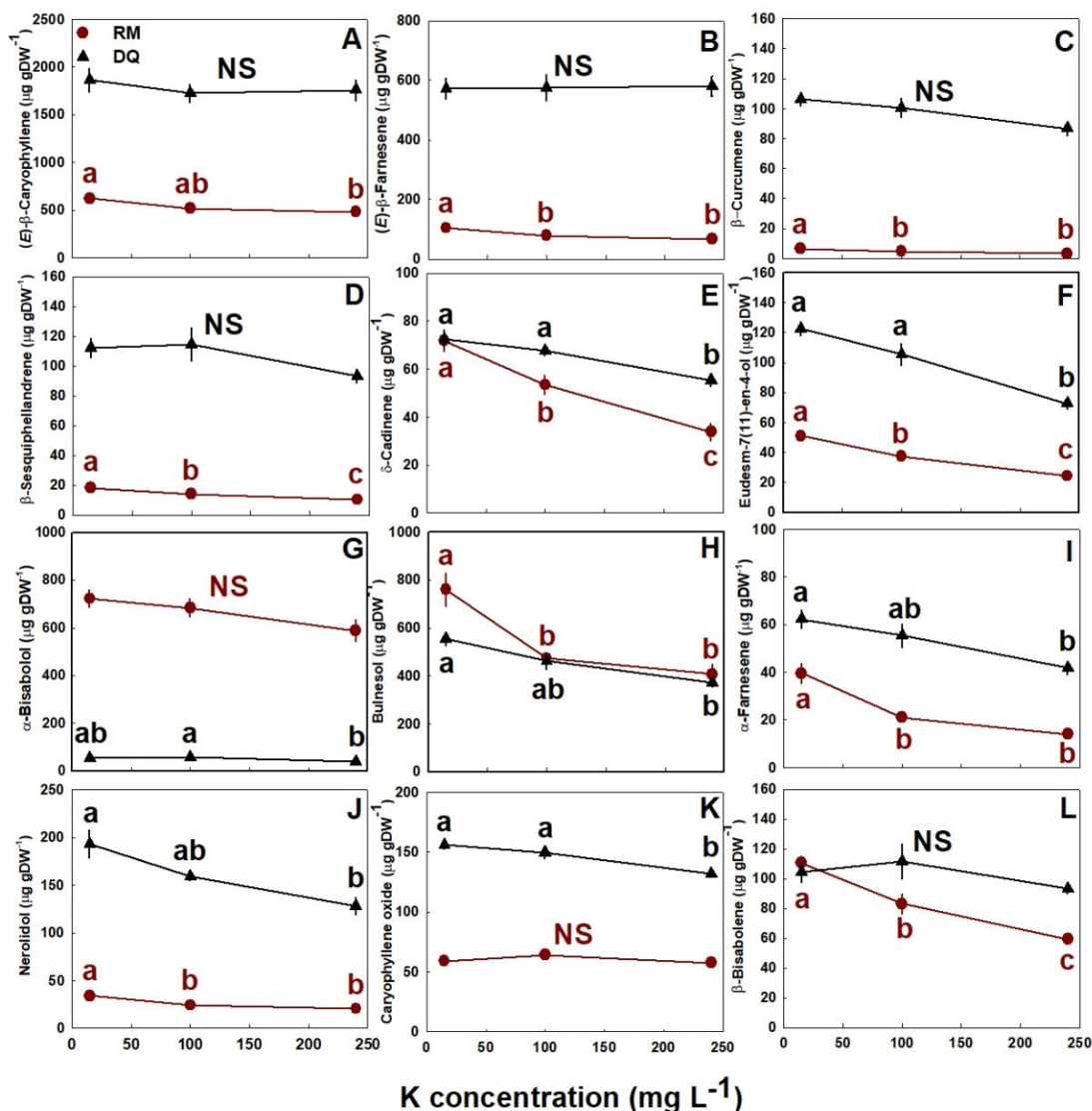


Figure S3. Effect of K supply on sesquiterpenes concentration in the medical cannabis cultivars RM and DQ. (E)-β-Caryophyllene (A), (E)-β-farnesene (B), β-curcumen (C), β-sesquiphellandrene (D), δ-cadinene (E), eudesm-7(11)-en-4-ol (F), α-bisabolol (G), bulnesol (H), α-farnesene (I), nerolidol (J), caryophyllene oxide (K) and β-bisabolene (L) concentration in the top (primary) inflorescence. Data are means ± SE (n=5). Where not seen, the error bars are smaller than the symbol size. In the One-way ANOVA results, NS signifies no significant differences between treatments within a variety, and different small letters signify significant differences between treatments by Tukey HSD test at $\alpha=0.05$.

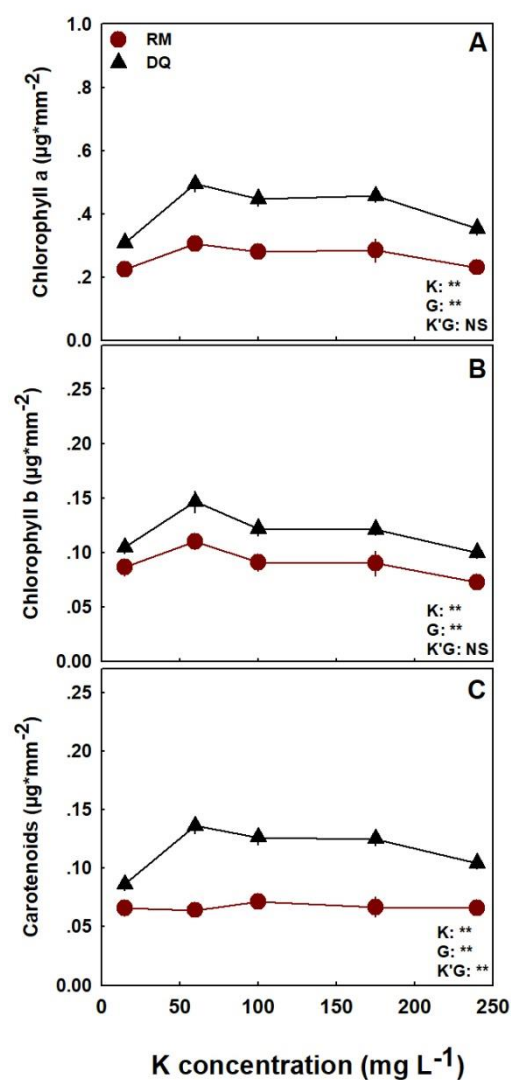


Figure S4. Effect of K supply on the concentration of photosynthetic pigments in the medical cannabis cultivars RM and DQ. Chlorophyll a (A), chlorophyll b (B) and carotenoids (C). Presented data are averages \pm SE (n=5). Where not seen, the error bars are smaller than the symbol size. Results of two-way ANOVA indicated as $**P < 0.05$, *F*-test; NS, not significant $P > 0.05$, *F*-test. results, K'G represents the interaction between K and genotype.

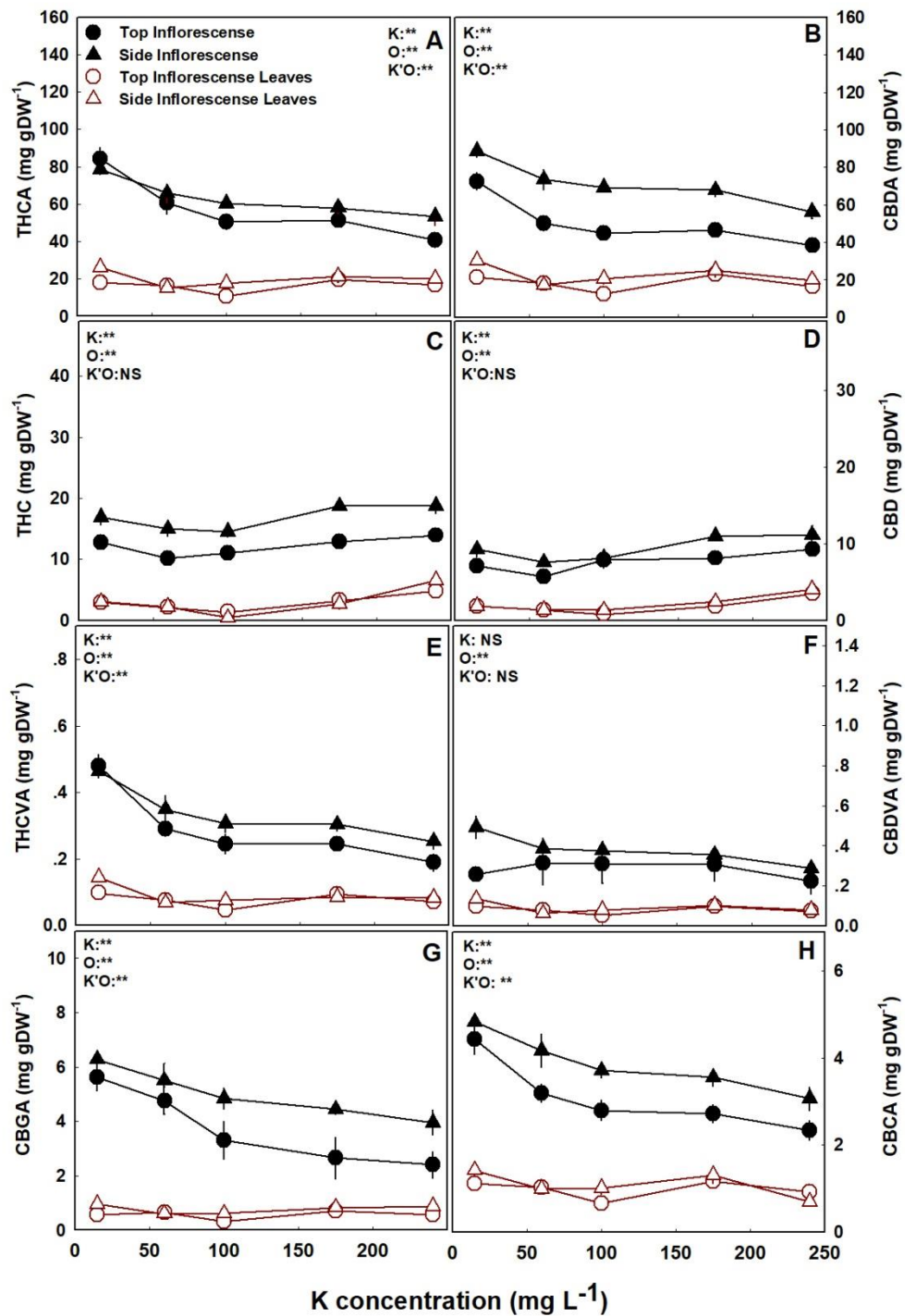


Figure S5. Effect of K supply on cannabinoid content in the medical cannabis cultivar RM, in mg g⁻¹ dry weight. THCA (A), CBDA (B), THC (C), CBD (D), THCVA (E), CBDVA (F), CBGA (G), and CBCA (H) concentration in top (primary) and side (secondary) inflorescences and inflorescence leaves. Presented data are averages \pm SE (n=5). Where not seen, the error bars are smaller than the symbol size. Results of two-way ANOVA indicated as ** $P < 0.05$, F -test; NS, not significant $P > 0.05$, F -test. In the ANOVA results, K'O represents the interaction between K and the plant organ.

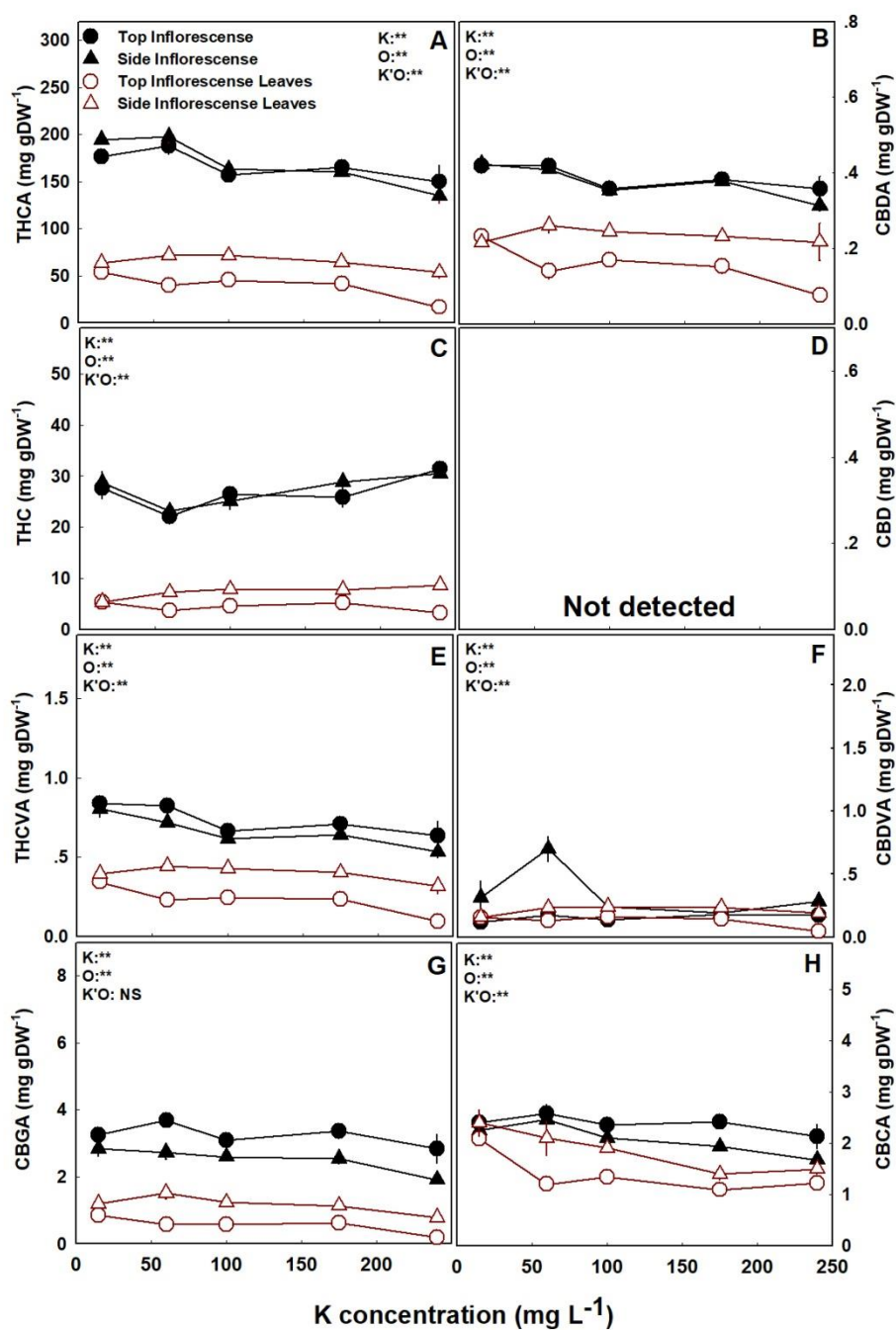


Figure S6. Effect of K supply on cannabinoid content in the medical cannabis cultivar DQ, in mg g⁻¹ dry weight. THCA (A), CBDA (B), THC (C), CBD (D), THCVA (E), CBDVA (F), CBGA (G), and CBCA (H) concentration in top (primary) and side (secondary) inflorescences and inflorescence leaves. Presented data are averages \pm SE (n=5). Where not seen, the error bars are smaller than the symbol size. Results of two-way ANOVA indicated as ** P < 0.05, F -test; NS, not significant P > 0.05, F -test. In the ANOVA results, K'O represents the interaction between K and the plant organ.