



First Article:

Article title	Improving Nutrients Uptake and Productivity of Stressed Olive Trees with Mono-Ammonium Phosphate and Urea Phosphate Application.
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Abstract

Nutritional status improvement is a surrogate approach to overcoming undesirable soil conditions. This study was performed in sandy clay loam soil that was characterized by certain undesirable parameters ($E_{c} = 6.4$ vs. 7.2 $dS\ m^{-1}$, $CaCO_3 = 8.8$ vs. 9.2% , and $pH = 7.78$ vs. 7.89) on olive (*Olea europaea*, Arbequina cv.) in the 2020 and 2021 seasons to investigate the influence of two highly soluble phosphorus fertilizers, mono-ammonium phosphate (MAP) and urea phosphate (UP). The treatments included 0.336 , 0.445 , and 0.555 $kg\ tree^{-1}$ for MAP1, MAP2, and MAP3 and 0.465 , 0.616 , and 0.770 $kg\ tree^{-1}$ for UP1, UP2, and UP3, respectively, in comparison to granular calcium super-phosphate (GCSP) at the recommended rate (0.272 $kg\ P_2O_5$ equal 1.75 $kg\ tree^{-1}$). This experiment was established according to a randomized complete block design. Generally, our results indicated that both MAP and UP applications surpassed GCSP for all studied parameters except leaf copper uptake in the 2021 season. Moreover, among the HSPFs applied, it was found that applying the maximum levels gave the best results. However, MAP3 gave the maximum values for shoot length, SPAD reading, and dry fruit matter. Moreover, UP3 produced the best results for the leaf area, olive tree yield, total olive yield, total fresh weight, flesh weight (FIW), fruit length (FrL), and leaf Fe content in both seasons.