

THE POSSIBILITY OF USING INFLORESCENCE ANALYSIS TO EVALUATE THE NUTRITIONAL STATUS OF OLIVE TREES

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The main objective of this work was to evaluate if inflorescence analysis can be considered as an alternative to foliar diagnosis in determining the nutritional status of olive orchards. Olive leaves from cv. Arbequina, planted under high density planting system in two different sites (Tunisia and Spain), were sampled at 5 developmental stages (inflorescence emergence, fruit set, pit hardening, fruit development and fruit maturity) during two years, 2006 and 2007. Inflorescence samples were taken at the stage denominated inflorescence emergence, when the corolla changes from green to white color. Results showed that no significant correlations were obtained between inflorescence and leaf analysis for N, P, K, Ca and Mg for each site in both years. When ignoring the site of experimentation, some significant correlations were obtained between leaves and inflorescence during both years of experimentation. However, correlations were not repeated in both years. At the pit hardening stage, which coincides with the standard date for leaf sampling, significant correlations between leaves and inflorescence were obtained for N ($r=-0,827^{**}$) in 2006 and for N ($r=-0,604^*$), K ($r=-0,527^*$), P ($r=-0,760^{**}$) and Ca ($r=-0,824^{**}$) in 2007. Further work is required to assess the possibility of using inflorescence analysis to diagnose the nutritional status of olive trees.

Keywords: flower analysis, nutritional status, olive trees

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