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Effect of liming on olive tree (cv. Cobrancosa) grown in acidic soils

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In the northeast of Portugal, the soils where the olive trees are usually grown are mostly acidic. In accordance with the results of soil analyzes the laboratories used to recommend the application of limestone. However, it is not experimentally demonstrated if the varieties grown in the region are well adapted to soil acidity or if they respond to the application of limestone. Three experiments were carried out to test the response of cv. Cobrancosa, one of the most popular cultivars in the region, to the lime application. One field trial was carried out in a commercial young orchard (three-years-old). A second field trial was installed on a plantation devoted exclusively to the experiment. Two fertilizer treatments were imposed in each one of these experiments: lime application; and control. The third trial consisted of a pot experiment where five different soils were used (pH varying between 4.7 and 5.8) and two fertilizer treatments were imposed (lime application and control). After three years of observations, the field trials showed a slight but consistent increase in the growth and olive yield (in experiment 1) in the amended plots but the differences did not have statistical significance. Leaf calcium significantly increased in all amended plots in comparison to controls. Soil available phosphorus (Egner-Riehm) also increased with liming.

Biography

M Angelo Rodrigues has obtained his PhD degree in Edaphic and Environmental Sciences at the University of Trás-os-Montes and Alto Douro, Portugal in 2000. He has coordinated and/or participated in two dozen National and International research projects. He has published 130 scientific papers (31 in ISI/JCR journals), book chapters and technical reports. He has been Deputy Director of the School of Agriculture of IPB and President of the scientific committee of the Master's program of Agroecology at the same institution. He was Vice-Coordinator of the Mountain Research Centre and Vice-Delegate of the Order of Engineers of the district of Bragança, Portugal.

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