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I International
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in Mountain Regions

Book of Abstracts



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Effect of liming and N, P, K or B application as fertilizer on chestnut tree crop nutritional status and growth

Margarida Arrobas, Isabel Q. Ferreira, Sandra Afonso, Manuel Ângelo Rodrigues
Polytechnic Institute of Bragança, Bragança, Portugal

The chestnut tree is practically the only cash crop grown in the mountain highlands of NE Portugal. Despite the many phytosanitary problems that this crop is currently facing, producers have been increasing the planted areas in response to favorable prices that the chestnut fruit has been reached in the market. The farmers have also been showing a new attitude regarding the cropping technique. In the past, the chestnut groves were a very marginal crop rarely fertilized. Nowadays, the producers seek to make rational fertilizations, hoping to balance the trees, allowing them to better cope with unfavorable biotic and abiotic stresses and stimulate productivity. However, studies on chestnut trees fertilization are rare. Little is known about the response of this species to liming or to fertilizers application. In this work, results are presented on the response of young chestnut plants to liming and nitrogen, phosphorus, potassium or boron application. Three years after planting, the results showed that the application of the nutrients N, P, K or B as fertilizer increased the concentration of each one of the respective nutrients in the leaves. However, the height of the plants was particularly reduced in the plots not fertilized with boron, followed by those not fertilized with potassium, in comparison to the plots receiving the respective nutrients. Boron and potassium appeared as the most limiting nutrients in this early phase of plant growth.