

عنوان مقاله:

Foliar Nutrient Applications to Barberry (*Berberis vulgaris*). II: Effects on Leaf Nutrient Content and Physico-Chemical Characteristics of Fruit and Yield

محل انتشار:

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خلاصه مقاله:

Barberry (*Berberis vulgaris* L.) is exclusively and widely cultivated in the South Khorasan province of Iran. This experiment aimed to evaluate the foliar application of urea, boric acid, iron sulfate, zinc sulfate, and copper sulfate effects on the nutrient content of leaf, yield, and physicochemical properties of barberry fruit. The experimental design was a randomized complete block as factorial with three replications. In the current research, urea with three levels (0, 1 and 2%), boric acid, iron sulfate, zinc sulfate and copper sulfate, each with three levels (0, 1500 and 2500 mg L⁻¹), and all of the fertilizers have been sprayed on barberry before full bloom at the rate of 3 L tree⁻¹. Concentrations of nitrogen, boron, iron and zinc in treated leaves of the trees were significantly higher than the untreated trees. A significant increase in yield was found by the application of 1% and 2% urea and foliar spraying all of the fertilizers together with all concentrations compared to the control. Also, the fruit weight was significantly enhanced using 1% and 2% urea, foliar spraying of all the fertilizers together (urea 2% + other fertilizers each 2500 mg L⁻¹) and iron sulfate 2500 mg L⁻¹ compared to control. Foliar spraying of fertilizers (urea 2% + other fertilizers each 2500 mg L⁻¹) brought about the highest fruit weight (0.38 g). Urea, boric acid and foliar spraying of all the fertilizers with different concentrations significantly increased pH, total anthocyanin and total soluble solids and significantly decreased total acids in comparison with the control. It can be concluded that foliar application of urea with concentrations of 1% and 2% increased the content of leaf nitrogen, yield, TSS, total anthocyanin, and pH of barberry fruit.

کلمات کلیدی:

Berberis vulgaris, foliar nutrient, Urea, fruit quality

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