

عنوان مقاله:

Investigation of the Effects of Thin Kaolin Coating on the Biochemical Characteristics and Moisture Content in the Rhizosphere of Apple Cultivars

محل انتشار:

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خلاصه مقاله:

The present study aims to evaluate the effects of thin kaolin coating on some biochemical characteristics in commercially important cultivars (Golden Delicious and Red Delicious) of apple trees. The factorial experiment was conducted on two apple cultivars (Red Golden and Golden Delicious) in a randomized complete block design with four replications at four thin coating levels (control, ۲, ۴, and ۶%) in two regions (Bonab thermal power plant and Omran Company in Sahand new city, Tabriz) during two years. The measured indices included ion leakage, total phenol, catechin, antioxidant activity, proline, fruit surface temperature, yield, and soil water content at different depths of the rhizosphere. The statistical analysis results indicated prominent differences between the measured traits at a significance level of ۵%. Comparison of the mean values indicated that the increasing utilized kaolin concentration elevate the moisture content of rhizosphere at different soil depths. However, no significant differences were seen between the two cultivars within the two regions. Further to these, the ion leakage amount, total phenol, catechin, total antioxidant activity, proline, and leaf surface temperature decreased with increasing levels of kaolin for the two examined cultivars in two regions. The two regions were not significantly different in this regard.

کلمات کلیدی:

antioxidant, ion leakage, temperature, soil water

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