

THE EFFECT OF IRON AND ZINC SPRAYING ON APPLE HARDNESS BEFORE AND AFTER STORAGE IN SEMIROM

Nasrin. Pirmoradian *, Ahmad Mohammadi Ghehsareh

Faculty member, Islamic Azad University, Isfahan (Khorasgan) Branch, Department of Soil Science, Isfahan, Iran.

**Nasrin_farzin20@yahoo.com*

Introduction

Semirom has a convenient climate for construction of apple gardens. Due to the mass production of apple and because of calcareous nature of the region soil, most of the trees have the problem of absorbing materials such as zinc and iron. Therefore a pilot study was conducted to investigate the effect of iron and zinc spraying on the hardness of apple tissue in Semirom.

Materials and Methods

The experiment was carried out in split factorial in randomized blocks design with 16 treatments and three times on two types of Red Delicious and Golden Delicious apple. Iron Spraying was conducted in three levels: zero (control), one in a thousand and two in a thousand; and zinc spraying was conducted in three levels: zero (control), two in a thousand and three in a thousand in three stages. During the fruit harvest in autumn, the hardness of the fruit tissue was measured and some of the samples were transferred to refrigerator for storage; they were out of storage after four months and their tissue hardness was measured.

Results and Discussion

Finally the statistical analysis using Duncan mean comparison software and test showed that the effect of iron and zinc treatments on hardness of fruit tissue (especially in Red type) had a significant difference.

General Conclusion: In general it can be concluded that suitable nutrition of apple trees especially consuming iron and zinc could have a positive impact on fruit tissue hardness; thus it would increase the quality of the product.

Keywords: apple, iron, zinc, tissue hardness, spraying

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