

A study to identify effects of manure and foliar application of zinc sulphate on zinc deficiency in Golden apple Yield

Gh. Alizadeh and M.mahmoodi

Expert and faculty member of Mazandaran Agriculture Research Center.

Zinc deficiency on fruit trees especially Golden apple trees is an important factor in yield reduction in apple growing regions of Khorasan. In extreme cases it is along with necrosis of branches. Application of manure will provide nutrients for plant, improve physical properties and change locally soil pH and also will increase availability of microelements. The present experiment was conducted to study the effects of manure on availability of zinc in soil and zinc foliar application on remedying zinc deficiency in Golmakan Station for eight years. A randomized complete blocks design was used with three replications and four treatments. According to the results obtained from the experiment the manure and zinc sulphate increased concentration of zinc in leaves during the experiment period so that it was increased to 24 mgkg^{-1} at the last year of experiment. The manure application caused an increasing of zinc on leaf 2.1 mgkg^{-1} . Available zinc in soil was increased by application of manure and zinc sulphate in comparison with other treatments. The manure was not significantly effective on soil pH but it improved significantly yield of apple.