

Abstract

This study was carried out during 2003-2004 in a commercial garden in Mohammad abad region, 5 Kilometers from Jahrom to study the effects of Nitrogen and Zinc on quality and quantity of Washington navel orange. Treated trees were 5 years old budded on Lime rootstock. In winter of every year 500 g of potassium sulphate, 250 g super phosphate triple, 200 g of manganese sulphate and 50 g of Fe sequestron were applied to the trees. The experimental design was RCBD factorial with 16 treatments and 4 replications. Treatments included 4 levels of N (0, 400, 600 and 800 g) Per tree in the first half of May as soil application and 4 levels of zinc in the form of zinc sulphate (0, 5, 8 and 10 g/L) sprayed on trees in second half of May. Results showed that, application of N and Zn had Positive effects on yield of Washington navel orange. Mean yield during two years increased by 59.6% in 800 g N and 10 g/L Zn treatment in comparison with control. In addition to positive effects of N and Zn on yield, most fruit quality factors such as Juice density, TSS, pH, total acid (TA) and vitamin C improved. Thus, Improvement of yield and fruit quality of Washington navel orange, additional application of N in early May and spray of Zn in late May is recommended.