Tropentag, September 14-16, 2010, Zurich

"World Food System —
A Contribution from Europe"

Effect of NAA, KNO_3 and Fe on some Characteristics of Leaf and Fruit of Peach (*Prunus persica* L.) cv. Early Coronet

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Abstract

This study was carried out in 2008 to investigate the effect of three treatments containing different concentrations of Naphthalene acetic acid (NAA) purity 98 % (0 and 5ppm), KNO_3 (36.5 % K) 0, 0.1 and 0.2 %, and Fe (NaFeEDDH) Technical Sodium Ferric ethylenediamine dio-hydroxyphenyle acetate (Fe approx. 6 %) 0, 30 and 60 ppm. Trees used for this investigation were four years old peach (*Prunus persica* L.) cv. Early coronet, budded on seedling peach rootstocks. Trees were selected from an orchard in Seije, Kurdistan Region, Iraq. At one month after fruit set the trees were spayed at two times (24/April/2008 and 25/May/2008) till run off with the NAA, $KNO_3$and Fe.

Raising the levels of NAA to 5 ppm, KNO_3 to 0.2 % and Fe to 60 ppm led to a significant increase in the value of leaf area, chlorophyll (a), fruit pulp thickness, seed weight, and fruit dry weight as compared with untreated trees. NAA, KNO_3 and Fe sprays caused a significant increase in leaf nutrient contents (P, K, Ca, and Fe) as compared to the control. On the second of February 2009 foliar spray with 0.1 % and 0.2% KNO_3 caused a significant increase in the percentage of flower bud initiation, whereas flower bud initiation was not affected by NAA and Fe application. The interaction between foliar spray of 5 ppm NAA $\times$ 0.2 % KNO_3 $\times$ 60 ppm Fe significantly increased leaf area, chlorophyll (a), fruit pulp thickness, seed weight and fruit dry weight, also caused significant increase in leaf nutrient contents (P, K, Ca, and Fe).

Keywords: Fe, Fruit, KNO_3, NAA, peach, spray treatment,

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