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The beneficial effect of NAA, Zn, Ca and B on fruiting, yield and fruit quality of Alphonso mango trees

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Abstract: Alphonso mango trees grown under drip irrigation system were sprayed twice at flower bud emergency and full bloom individually or in combinations with zinc chelate at 0.2% (as EDATA 13% Zn), calcium chelate at 0.4% (as Amino acids 14% CaO), Boron at 200 ppm (as Mono Ethanol Di-amin) and Naphthalene acetic acid (NAA) at 25 ppm. The obtained results show that the sprayed materials (NAA + Zn + Ca + B) had a positive effect on fruit set, fruit drop and fruit retention, also in reducing malformed panicles percentage. The used materials increased yield of Alphonso mango trees especially when sprayed in combinations, since treatment No 6 (Zn + Ca) gave the highest value and increased tree yield by about 445 and 435% than the control in the first and second seasons, respectively, followed by treatment included all sprayed materials (No 16). As for fruit quality (physical and chemical properties), it's clear that spaying Zn, Ca, B and NAA gave a high quality comparing with the control. Concerning leaf mineral content, treatments included more than two spraying materials gavehigher values than those included two or single material including the control.
Key words: Alphonso mango – NAA – Zinc – Calcium – Boron – Foliar spray.

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