

**Title** Factors affecting creasing and splitting of Nova mandarin fruit

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### **Abstract**

Splitting and creasing are amongst two major physiological disorders that affect considerably the production and the quality of fruits of different varieties. The two problems can account for heavy losses, from year to year, of good percentage of fruits of Nova mandarin in Morocco. The causes of the problems are diverse. Our studies during the last 4 years, showed that the incidence and the extent of splitting and creasing are affected by weather conditions during fruit growth, mineral nutrition status of the trees, soil and water quality in term of salinity, rootstock, irrigation scheduling and harvesting period. Foliar applications of 1 or 2% of calcium nitrate and potassium nitrate alone or combined with GA3 or 2,4-D as a single or several applications, and sprays of new fertilizers from the industry composed of several elements, such as chelated Ca and/or K with high concentration of free amino acids, phosphorous and boron, depending on the type of the composite, during the summer time and the beginning of autumn showed less splitting and creasing in comparison to non treated trees. Calcium nitrate at 1 % applied monthly from August to November, two applications in September of Phorty-maxi (a fertilizer containing 480g/l of P<sub>2</sub>O<sub>5</sub>, 145 g/l K<sub>2</sub>O, 5g/l B and 5g/l Mn) and one application in September of Aminoquelant-Ca which contains 8% CaO, 4.6% free amino acids, 4.9% N and 0.2% B, have reduced significantly the incidence and the severity of the two physiological disorders. The presentation will discuss in details various treatments and their effects on leaf and fruit peel mineral status, fruit growth, the occurrence and severity of each disorder during fruit growth, maturation and tree storage period.