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BEHAVIOR OF NAVEL ORANGE TREES TO APPLICATION OF THE ANTIOXIDANT GLUTATHIONE

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ABSTRACT

During 2014 and 2015 seasons, Navel orange trees treated with the antioxidant glutathione at 0.05 to 0.2%, once (at growth start), twice (at growth start and again just after fruit setting) or thrice (at the previous two dates and at one month later). The target was selecting the optimum concentration and frequency of application of glutathione that responsible for improving yield quantitively and qualitatively.

A remarkable promotion on growth aspects, leaf chemical components, fruit setting%, yield and fruit quality was observed due to treating the trees with glutathione at 0.05 to 0.2% once, twice or thrice relative to the check treatment. The promotion was in proportional to the increase in both concentrations and frequencies of application without material promotion among the higher two concentration (0.1 & 0.2%) and frequencies of application (twice or thrice).

Carrying out two sprays of glutathione at 0.1% at the start of growth and again just after fruit setting was responsible for improving yield and fruit quality of Navel orange trees grown under Minia region conditions.

Keywords: fruit quality, glutathione,Navel oranges, yield.