# COMPARISON OF DRIP AND MICROSPRINKLER IRRIGATION IN ADULT TREES OF CV. REED

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The study was done on 7.5 years old trees, drip irrigated from planting, and lasted for 6 years. Three treatments were compared: drip irrigation with 6 drippers.tree$^{-1}$, microsprinkler irrigation with 1 drippers.tree$^{-1}$ and drip irrigation prebloom pruned only in the first experimental year. The design was on randomised blocks with 6 replicates of 3 trees per treatment. A detailled root distribution and soil matric potential study was done 18 months after the start of the experiment. There were very marked differences between treatments. Leaf K levels and to a lesser extent N levels were higher with microsprinklers. P, Ca and Mg levels were similar. Potential yield, including fruits falling near pickinG time, tree efficiency, as yield per unit trunk sectional area, and trunk growth were similar for the three treatments in the first two years. This was probably due to the negative effect of new root system established under microsprinklers and, to a lesser extent, of the prebloom pruning in the first year. In the last four years potential yield and tree efficiency were significantly higher with microsprinklers. Trunk growth and fruit size had a similar pattern but with smaller differences. In this low water retention soil microsprinklers, with over twice the wetted area, significantly improved tree growth and cropping. Pulp dry matter content, measured in the second year, showed that ripening was significantly retarded by drip irrigation with differences of 1.4% in June and 0.9% in September, beginning and end of the picking season.