Studies of nutrient management on the quality improvement of wax apple

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Abstract

1. Additional application of silica slag could increase pH value (1), Ca (1000 ppm) Mg (160 ppm) and Mn (50 ppm). Na was increased ranging from 38 to 66 ppm when coarse salt was Applied. Mg (16 ppm) was increased by application of magnesium sulfate. Ca, Mg, Mn and Na had prominently increased while magnesium sulfate, coarse salt and silica slag were applied simult-ancovely.
2. Higher rate of sugar in fruit was obtained from G.D.E.N (1.5%) treatment; and low rate was treated with A.C.F. N (1.27%). P and K were not significantly different among all of treatments. Ca and Mg on leaf were not increased when either silica slag or magnesium sulfate was evenly used. Mn might be increased if silica slag was used. Mn and B also could be increased about 100 ppm and 60 ppm respectively while manganese sulfate or $Na_2B_4O_7$ solution was sprayed.
3. The result indicated that the fruit sugar grade was highest (9.25° Brix) by additional application of magnesium sulfate, coarse salt, silica slag and 0.2% mangaese sulfate solution at the same time. Sugar grade could increase about Brix 1° using magnesium sulfate or silica slag. Application of magnesium sulfate and (2% manganese sulfate solution also could increase sugar grade (8.4° Brix).
4. The relationship was positive between pH value, Ca, Mg and Mn, and sugar grade in wax apple fruit.