

# Effects of Orchard Nutrition Status on the Fruit Qualities at Taitung Area <sup>1</sup>

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## SUMMARY

This study was Carried out in valencia and Sweet apple Orchards at Taitung. There were 80 % of 51 orchards located on slope stonyland . By long term tillage and chemical fertilizer applications, the soils were acidified and the pH values of these orchards declined years by years. Also, the available calcium, magnesium content declined and then affected the growth of fruit trees. For lack of the source of organic matters, its content in the soil generally low as usual in these orchards, it seemed that the nitrogen and potassium fertilizers were over applied on valencia orchards, while the nitrogen applied on sweet apple orchards were too low. The phosphate and Potassium contents in soil were highly accumulated in surface, where the farmer always applied the fertilizer on. The soil available  $P_2O_5$  content was positively correlated with leaf phosphate content in valencia and sweet apple orchards. Soil available MgO was also positively correlated with magnesium content in leaves attached on fruiting and nonfruiting twig at 1% significant level. Fruit Sweetness was positively correlated with leaf potassium contents. Leaf nitrogen, phosphate, potassium, calcium and magnesium content were different from orchard by orchard for various tree age, environment, soil fertility and fertilization-management.

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1. The finance of this Project was supported by COA.

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