

The Chlorosis Investigation on Orah Mandarin (*Citrus* “Temple” tangor x “Dancy” mandarin)¹

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Abstract

In recent years, the leaf chlorosis of citrus in Tainan and Chiayi and other regions has resulted in severe defoliation and death of aged trees. There are many factors to induce this kind symptom and they are may also interacted; however, studies on comprehensive diagnostic investigations are few. This study was carried out in Lin's Orah mandarin orchard in Shuishang township, Chiayi County. In 2020, the mean number of shoots in the spring flush of single branch group of chlorosis plants was 124 less than control plants, decreased of about 17.68%, and the number of single-flower leafy shoot inflorescence in reproductive shoots was 60.8, decreased of 53.44% compared with control plants, and the total annual number of shoots was significantly less than control plants. The investigation shows that the soil moisture content is only 6%-8% in the dry period in winter, and the soil penetration resistance in the field area reaches 4,000-5,000 Kpa. Nitrogen (N), potassium (K) and zinc (Zn) elements are deficient in all plants. The comprehensive diagnosis showed that element deficiency in compacted soil and under the sympathy of water shortage and adversity in winter may aggravate the appearance of chlorosis symptoms in some plants, resulting uneven distribution of chlorosis plants in orchard.

Keywords: Citrus flush, Leaf yellowing, Soil compaction, Element deficiency, Field diagnosis

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