

Effects of Different Covering Crops in Sugar Apple Field on the Soil Properties and Leaves Nutrient Contents of Sugar Apple Plant

Wen-Yen Ting¹

Abstract

Investigation of this project was to study the different covering crops on the soil properties and leaves nutrient contents of sugar apple. Results indicated that soil pH value was not affect by the different covering crops compared with cleaning culture. The organic matter contents were increased by the different coverings except on using herbicide. The treatment of original wild grass had higher content of soil efficient phosphorus than others treatments, about 371.7mg/kg. The treatment of Perennial peanut had the highest contents of soil available K、Ca、Mg among all the treatments. To analyze these leaves nutrient contents of sugar apple plant, indicated that the treatment of original wild grass had the least contents of P, K, Ca, Mg among others. The micronutrient of Fe、B contents of sugar apple leaves were not significant among all the covering crops. The Perennial peanut is a good covering material, but it needs more management and higher costs than others, the management cost of Perennial peanut need 42,370 NT in one year, but in the later years, it does not need replant each year, so it cost fewer than the first year. The study was conducted only one year, it need to observe and investigate the effect of different coverings on the orchard field for a long time, to find the suitable and profitable covering on the sugar apple plant.

Key words: Sugar apple, Covering crop, Management of soil

¹Assistant Researcher of Taitung DARES, COA.