

## Effects of Carbonized Dried Mackerel Waste Application on the Growth and Fruit Quality of Sugar Apple (*Annona squamosa* L.)

Chi-Chung Chang<sup>1</sup>

### Abstract

The influence of carbonized dried mackerel waste applied as soil amendment on the growth and fruit quality of sugar apple was investigated in the Taimali and Dunghe experimental field. In the study, three treatments were performed: recommended chemical fertilizer (control; CK), complex of carbonized dried mackerel waste with recommended chemical fertilizer (CK+CDMW) and complex of carbonized dried mackerel waste with two-thirds recommended chemical fertilizer ( $2/3\text{CK} + \text{CDMW}$ ). The results showed soil P, Ca, Mg content in treated with CDMW plots were higher than control plots in the Taimali and Dunghe experimental field. Leaf P, Ca, Mg, Zn, Fe content of plant grown at with CDMW plots were higher than grown at control plots in the Taimali and Dunghe experimental field. The results of fruit quality investigation showed that fruit weight of sugar apple treated with CDMW was better than control. The fruit weight of CK+CDMW treatment was 668.5g (control was 499.8g) in Taimali experimental field and 679.4g (control was 621.7g) in Dunghe experimental field, but it had no significantly different among all three treatments.

**Key words:** Carbonized dried mackerel waste (CDMW), Nutrient element, Soil property, Sugar apple.

---

<sup>1</sup>Assistant researcher of Taitung DARES.