

## **ABSTRACT**

### **EFFECT OF BAGASSE MULCHING AND REDUCED TILLAGE ON THE DIVERSITY AND ABUNDANCE OF ANTS IN THE SUGARCANE FIELD**

**By**

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This research aims to determine the effect of mulching and reduced tillage on diversity and abundance of ants in sugarcane field. The research was done in January and July 2011 in sugarcane field in Gunung Madu Plantations Company, Central Lampung. The experiment was designed using a split plot design (2x2x5) with soil tillage as the main plot, mulching as the subplot and five replications (blocks). The sampling of ants used pitfall traps. The research showed that 13 ant genera were found in the sugarcane field. Total abundance of ants and *Paratrechina* were higher in no-mulch plots. Shannon index, total ant abundance and abundance of *Anoplolepis* in no-tillage plots were higher than those in full tillage plots, but the abundance of *Iridomyrmex* was lower in no-tillage plots. The effects of mulch and reduced tillage on ant diversity and/or abundance were independent while those on the ant total genera and on *Gnamptogenys* abundance were dependent.

Key word: reduced tillage, mulch, ant diversity and abundance