ABSTRACT

EFFECT OF BAGASSE MULCHING AND REDUCED TILLAGE ON THE DIVERSITY AND POPULATION OF SOIL SPIDERS IN THE SUGARCANE FIELD

By

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Field sampling of soil spiders using pitfalls was done in the month of June and July 2011 in sugarcane plots treated with four combinations of mulching and reduced tillage in PT Gunung Madu Plantations, Terusan Nunyai – Central Lampung. *Pitfall* was set 8 m from the center point of each sample plot of 40 m x 25 m. After 24 hours the recovered soil spiders were collected and then identified up to the family level. Results showed that five families of soil spiders (Lycosidae, Amaurobiidae, Salticidae, Oxyopidae and Thomisidae) can be collected from the sugarcane plantations. All five were found in the no-tillage plots while only three were found in the full-tillage plots, i.e. Lycosidae, Amaurobiidae dan Salticidae. The families Oxyopidae and Thomisidae could not be found in bagasse-mulched plots whereas the Famili Salticidae could not be found in bagasse-free plots. The reduction of soil tillage or bagasse-mulching affected the diversity but did not affect the population density of soil spiders (July 2011 data). The diversity of soil spiders was higher in no-tillage plots but their population was lower in bagasse-mulched plots.

Key words: soil spiders, diversity, population, reduced tillage, bagasse mulching.