ABSTRACT
SOME KIND OF COMPETITION AND POPULATION ON WEED
EARLY GROWTH OF SUGAR CANE PLANT
(*Saccharum officinarum* L.)

By

Patrice Dwita Siagian

The presence of weeds in crop fields will lead to the early growth of sugar cane less than the maximum. The magnitude of this decrease is influenced by the types of weeds and weed population.

The experiment was conducted in South Lampung Regency Garden Experiments, Laboratory of Weed and Seed Laboratory of the University of Lampung starting in October 2011 to February 2012. Experimental plots are arranged in a ribbed design with 3 replications. The treatments are arranged in a factorial (5x4). The first factor is the 5 types of weeds (*Asystasia gangetica, Borreria alata, conjugatum Paspalum, Setaria plicata,* and *Cyperus rotundus*) and the second factor is the weed population (0, 20, 40, and 60 gulma/m^2). Homogenity of data was tested with Bartlett test and additivity of data were tested with Tukey test. If the assumptions are met, data were analyzed and followed by a variety of different test real smallest (LSD) at the level of 5%. This study aimed to study: (1) the influence of some weed species on early growth of sugarcane (2) the influence of weed population density of the initial perumbuhan sugarcane, (3) interaction of species and population density affect early growth of weeds in sugarcane.

The results showed that: (1*) Setaria plicata* in a population of 60 gulma/m^2 able to suppress populations of sugarcane at the age of 4 and 6 MST. (2) weed populations 20, 40, and 60 gulma/m^2 able to suppress the number of leaves at the age of 8 and 12 MST and plant population at the age of 8 and 12 MST. (3) the interaction between species and weed populations in suppressing plant height at the age of 8 and 12 MST, plant population at the age of 4 and 6 MST, the percentage of weeds pentupan 4 and 12 MST, and the dry weight of sugar cane.

Keywords: Sugarcane Crop Competition, *Asystasia gangetica, Borreria alata, conjugatum Paspalum, Setaria plicata,* and *Cyperus rotundus.*